Assessment of the U.S. EPA EJP2 Grant Program

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Acknowledgments

EPA would like to thank the many grantees who were generous with their time in sharing their experiences. We hope this assessment will be useful to them as well as other environmental justice communities that are continuing to battle environmental problems. Similarly, we hope that professionals in the fields of environmental justice and pollution prevention will be able to apply the findings and strategies contained in this report to address the environmental challenges facing environmental justice communities.

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SECTION I—INTRODUCTION

Communities of color and low-income Americans seek not to redistribute pollution, from dirtier and over-exposed areas to cleaner and underexposed areas. They, instead, seek to prevent pollution at the source as that all Americans can breathe clean air, drink clean water and eat clean food.

Congressman John Conyers (D-Michigan) April 1993

This report presents the results of EPA's assessment of projects funded by the Environmental Justice through Pollution Prevention (EJP2) program from 1995 through 1997. The program provided funds to nonprofit organizations, tribes, and local governments in minority and low-income communities to apply pollution prevention approaches to environmental justice issues faced by these communities. EPA designed this study to assess the accomplishments of the grants, determine the factors contributing to project success, and shape the future direction for the program. Based on a comprehensive review of grantees' progress reports and supplemented with detailed phone interviews, this report summarizes the accomplishments of EJP2 grantees and draws some general conclusions about factors contributing to successful projects.

This study relies on grantees' insights and perceptions of program accomplishments and effective strategies. A more extensive evaluation of the EJP2 grant program would have included detailed feedback from businesses, residents, and other groups targeted by EJP2 grantees. Due to resource constraints, this approach was not feasible. Please see Appendix A for a detailed description of this study's methodology.

A. Background on the EJP2 Program

Since a 1992 EPA report, *Environmental Equity: Reducing Risk for All Communities*, indicated that minority and low-income communities are exposed to higher levels of pollution in their neighborhoods than the general population, the Agency has embarked on a number of initiatives to help communities mitigate pollution damage in their neighborhoods. These initiatives initially focused on acute and immediate problems faced by environmental justice communities. Recognizing that preventing pollution at the source can help break cycles of repeated degradation and injustice, EPA created the EJP2 grant program.

What Is Environmental Justice?

Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no group of people, including a racial, ethnic, or socioeconomic group, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies.

EPA Administrator Carol Browner established the EJP2 grant program in 1993 to support pollution prevention approaches in environmental justice communities. Pollution prevention—the reduction or elimination of pollutants *at the source*—is our nation's first choice for protecting the environment.[1] EPA believes pollution prevention is the best method to address environmental problems because it refocuses efforts from pollution control—cleaning up damaged environments—to preventing degradation from happening in the first place.

In the first three years of the program, EPA awarded more than $10 million for 131 innovative projects to address environmental justice concerns.[2] A team of EPA Headquarters and Regional staff selected these projects by conducting a nationwide competition for creative projects. EPA designed the competition to fund a wide array of organizations and communities interested in environmental justice, including urban areas, rural communities, tribes, different ethnic groups, and the poor. EPA did not limit the program to any specific set of environmental concerns. Funded projects addressed diverse issues including resource efficiency as well as air and water quality. Moreover, EPA did not predetermine the approaches to be taken by the communities. Rather, the Agency designed the program as a fund for innovation. EPA encouraged community groups, tribes, and local governments to identify environmental problems and potential approaches for their communities, within the general outline of prevention solutions to environmental justice issues.

Targeted Sectors and Communities

Through the EJP2 grant program, EPA funded projects in different sectors ranging from agriculture, to small and large businesses, to youth and community residents. In addition, EJP2 grantees targeted communities of different ethnic backgrounds and cultures. Targeted communities included immigrant communities of Haitians and Cambodians and ethnic communities of African Americans, Native Americans, Latin Americans, and Korean Americans. Many projects involved communities that host a mix of ethnic groups. Several EJP2 projects took place in the diverse Greenpoint-Williamsburg community of Brooklyn, New York, which is home to Hasidic Jews, Latin Americans, African Americans, Italians, and people of Polish origin.

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[1] In the Pollution Prevention Act of 1990, Congress declared "The national policy of the United States [is] that pollution should be prevented or reduced at the source whenever feasible; pollution that cannot be prevented should be recycled in an environmentally safe manner, whenever feasible; pollution that cannot be prevented or recycled should be treated in an environmentally safe manner whenever feasible; and disposal or other release into the environment should be employed only as a last resort and should be conducted in an environmentally safe manner."

[2] Appendix B summarizes the distribution of funding and grants by year and includes a table of all grant projects. EPA coded each grant project for easy reference with project summaries throughout the document. The appendix includes an alphabetical list of projects and the associated code.

Through the program, EPA funded a range of organizations to work on projects identified by the disadvantaged communities or developed in conjunction with these communities. Groups funded by EJP2 included nonprofit organizations (including both community organizations and environmental groups), tribes, and local governments. In nearly all cases, grantees partnered with other organizations to achieve project goals. For example, local government grantees often partnered with local community groups, trade associations, and pollution prevention technical assistance providers to deliver services to communities. In other EJP2 partnerships, tribal and community-based organizations took the lead and helped pollution prevention technical assistance providers and local government officials gain access to communities usually separated by linguistic and cultural barriers.

The summary table in Appendix B identifies the primary organizations funded and the sectors and ethnic communities they targeted.

Types of Projects Funded by EJP2

EJP2 grantees helped low-income and minority communities through a variety of innovative projects that have enabled residents to prevent pollution in their homes, businesses, and neighborhoods. EJP2 projects also have encouraged cooperation among communities, businesses, industry, and government to address common environmental goals. To facilitate analysis, EPA assigned each grant to one of the following categories (also shown in Figure 1)[3]:

Helping small businesses prevent pollution in communities. Projects included voluntary partnership programs, demonstration projects, revolving loan programs, and general technical assistance and training.

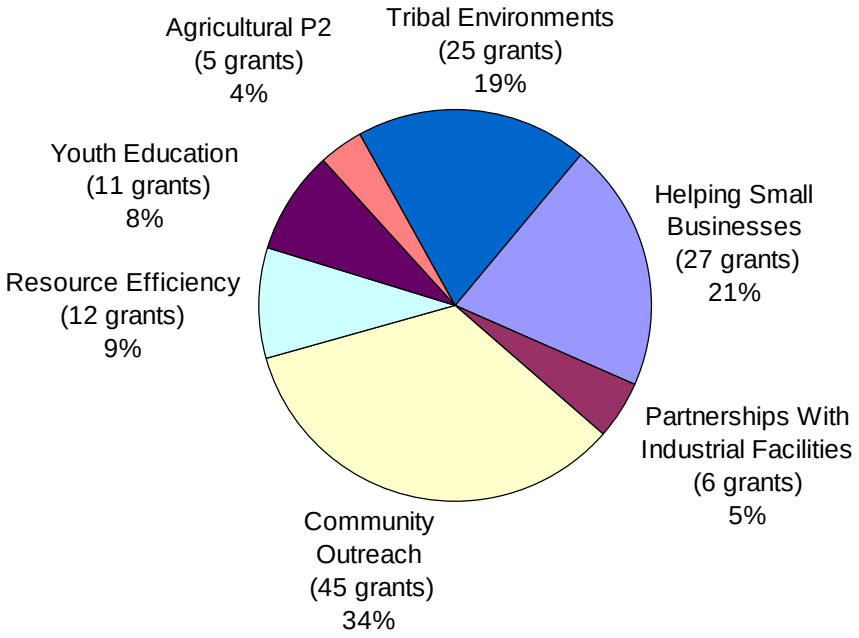
Fostering partnerships between industrial facilities and communities. Projects helped community residents to foster better communications with large industrial facilities in their neighborhoods and work with the facilities to make environmental improvements and address community concerns.

Educating communities about pollution prevention. Through EJP2 community outreach and technical assistance projects—including bilingual workshops, television broadcasts, brochures, and newsletters—grantees taught community members the skills they need to make informed environmental decisions and press for environmental change in their neighborhoods.

Promoting efficient resource use within communities. Projects focused on improving the quality of communities by demonstrating how housing could become energy-efficient, promoting alternative transportation, and developing community urban gardens.

[3] Appendix C identifies projects assigned to each category of activity.

Figure 1. Types of EJP2 Grant Activities Funded, 1995 to 1997[4]



Fostering youth education and involvement. Grantees carried out education programs and developed curricula to help youth understand environmental issues and develop their capacity to address environmental problems in their communities.

Demonstrating agricultural pollution prevention. Projects provided tools and education to farm workers on best management practices to reduce pesticide use and worker exposure. EJP2 projects also educated farm workers through worker safety projects.

Improving tribal environments. Grantees helped tribes develop overall strategies to address environmental concerns and promoted the development of tribal environmental legislation essential for preventing pollution. EJP2 projects also included pollution prevention outreach to tribal communities and technical assistance to tribal businesses.

[4] EPA funded a total of 131 projects from 1995 to 1997.

B. Organization of Report

The remainder of the report presents the results of the analysis and a discussion of findings. Section II presents EPA's findings and analysis of the grants and includes a summary of accomplishments and factors contributing to program success found among all EJP2 grantees. Sections III through IX provide detailed findings and analysis for the seven categories of project types. Section X offers conclusions.

SECTION II—FINDINGS AND ANALYSIS

A. Accomplishments

As a condition of the grant award, EPA required EJP2 grantees to measure the impact of their projects on the communities they served. Of the 107 EJP2 grantees for which EPA gathered information, forty-three measured the impacts of their projects through surveys and interviews with their target audience, while seventy-one provided anecdotal information.[5] Some grantees stated they were unaware of the measurement requirement while others either found it too difficult or planned to complete measurements after the grant period. Even though EPA can not fully measure results from all grantees, it can provide information on the impact of those EJP2 grants with documented results. Measures include reach, changes in awareness and understanding, behavioral change, environmental and human health improvements, grantee satisfaction with the EJP2 grant program, and sustainability.

Reach

While many grantees had difficulty measuring the impact of their projects on the communities they served, most grantees did measure the number of people reached through onsite visits, workshops, publications, and other efforts. Through the 131 EJP2 projects, grantees provided pollution prevention information and expertise to more than 600 businesses, 1,300 students, 2,800 farmers, and 47,000 residents. These figures demonstrate the breadth of EJP2 grant activities across the nation.

Impacts on Awareness and Understanding

While most grantees did not conduct follow-up surveys to measure changes in awareness and understanding of their target audience, 57 grantees provided anecdotal information to EPA indicating that they believe their target audiences improved their awareness and understanding of pollution prevention issues as a result of the grant. Some grantees, for example, noted that residents came to them more often with questions and environmental concerns after outreach through the grant. Other grantees reported feedback received from their target audiences:

Businesses participating in **Working Capital**'s pollution prevention training found the training to be effective and useful. One business manager, for example, stated, "I found [the training] useful in breaking down my business process to evaluate, receive feedback [on], and eliminate costly waste factors." Another business manager agreed, "This session helped me understand my waste. Now I can start taking preventative measures."

[5] Many grantees provided both anecdotal and measured impacts. Forty grantees provided anecdotal information only.

IMPACTS ON ENVIRONMENT AND HUMAN HEALTH

Although the EJP2 program's focus is on pollution prevention, many grantees completed projects that created environmental and health benefits in different ways, including recycling, community cleanups, and proper waste disposal. Fifteen EJP2 grantees measured the environmental impacts of their projects. Environmental improvements (including the name of the grantee reporting the result) include:

Pollution Prevented

1,000 tons of hazardous waste prevented due to business pollution prevention measures. *(Elizabeth River Project)*

3,650 tons of volatile organic compounds prevented annually due to air management district requiring use of water-based parts cleaners in a four-county area. *(Institute for Research and Technical Assistance)*

1,237 tons of carbon dioxide, 25,099 pounds of sulfur dioxide, and 9,095 pounds of nitrogen oxides prevented due to energy efficiency measures implemented in housing. *(Southface Energy Institute)*

37,810 gallons of pesticides conserved by farmers through secondary containment measures that enable farmers to reuse pesticides. *(WSOS Community Action Commission)*

95 percent reduction of styrene emissions at one business. *(Elizabeth River Project)*

26 percent reduction of nitrogen oxide emissions at another business. *(Elizabeth River Project)*

85 percent reduction of chemicals reportable under Emergency Planning and Community Right-to-Know Act by another business. *(Elizabeth River Project)*

70 percent reduction in annual air emissions from four dry cleaners. *(Cascadia Revolving Fund)*

132,412 gallons of water conserved by students at home. *(Council on the Environment)*

Materials Recycled

24,534 tons of hazardous waste recycled and 500 gallons of used oil recycled. *(Elizabeth River Project, Wichita-Sedgwick, Pima County, Pilot Point)*

27 tons of municipal waste recycled. *(Town of Meeker, Metropolitan Energy Center, St. Louis Sewer District)*

Proper Disposal of Waste

11 tons of household hazardous waste properly disposed of by businesses and residents. *(Lincoln-Lancaster, Pima County)*

7,940 pounds of trash and 300 tires cleaned up. *(Elizabeth River Project, Metropolitan Energy Center)*

Council on the Environment of New York City asked for feedback from students participating in an environmental education project. They learned that many students had raised their awareness and understanding of pollution prevention issues. Quotes from students included, "I learned why it is important to conserve water," and "I learned about the many different hazardous products we have in our homes, what makes them toxic, how they enter the environment, and how to substitute them with safer alternatives," and "Before I never used to think about what my family bought or threw away, but I have started to since the beginning of this project."

Several grantees measured the impact of EJP2 projects on awareness and understanding by conducting surveys of community participants. For example:

The **Broward County Department of Natural Resource Protection** in Florida conducted a post-project survey of 175 residents who participated in its pollution prevention workshops and tree planting activities. As a result of the EJP2 project, more than half of the residents believed they: now understood pollution prevention; had gained an understanding of the concept of "cool communities" and its connections to energy efficiency; and also, learned how to properly dispose of household hazardous wastes and appliances. In addition, more than half of the residents were interested in attending future meetings to receive further environmental education information from Broward County.

The **University of Northern Iowa** surveyed 52 businesses that attended demonstrations of auto repair pollution prevention equipment. On a scale of 1 to 5, with 5 being the highest rating, the grantee received an average score of 4.4 on the effectiveness of the demonstration in raising awareness and understanding of the technology.

Impacts on Behavior

Some grantees documented changes in behavior on behalf of the target audience as a result of their work, at least in part. Following are a few examples of behavior changes resulting from EJP2 projects:

The **America Works Partnership**, which provided pollution prevention training in construction and painting to residents of low-income communities in Chicago, Illinois, and Oakland, California, anecdotally noted an increase in safety and pollution prevention measures at sites that employed workers who participated in the EJP2 project.

The **Clean Water Fund**, which provided information on nontoxic pest control to residents, influenced Camden County, New Jersey, to declare an official policy for all county government buildings to use less toxic pest control methods.

The **Nebraska Sustainable Agriculture Society**, which provided financial support to eight local farming groups to encourage pollution prevention practices, kept in contact

with the groups after the grant period ended. The grantee found that four of the groups continued to practice pollution prevention measures and experienced an increase in membership and more requests for information on sustainable agriculture methods.

The **Tri-County Health Department**, which carried out a voluntary program to encourage auto repair shops to implement pollution prevention measures, followed up with 15 businesses that completed the program requirements. Tri-County found that 11 of the businesses (86 percent) continued to practice the pollution prevention changes they made one year after the grant period.

The **WSOS Community Action Commission**, which provided financial assistance to farmers to encourage the use of integrated pest management practices, reported that participants reduced their pesticide use on 444 acres of land.

The **Missouri Energy Resources Project** conducted energy audits of schools in the St. Louis Public School District and equipped 22 of the schools with new energy-efficient lighting systems.

Citizens for a Better Environment, which facilitated Good Neighbor Dialogues among businesses and residents in a low-income neighborhood in Chicago, noted a very significant reduction in particulate matter from one business participant that agreed to install a coal dust control device after meeting with residents.

Grantee Satisfaction with the EJP2 Program

Anecdotally, grantees said they were proud of what they accomplished and believed EJP2 funds were essential to their completing the projects. **Citizens for a Better Environment**, a grantee that helped minority communities in Chicago work with local industries to get their pollution concerns addressed, reported in its interview:

> The EJP2 grant helped us continue to build solid relationships between the community and local businesses through our Good Neighborhood Dialogues.

Council on the Environment, a grantee that implemented a curriculum to train students to become community environmental advocates, also stressed the importance of EJP2 funds to the project:

> The EJP2 grant helped us focus our education efforts on one community and allowed us to deliver a broad range of services to one of the most environmentally ravaged communities in the United States.

Sustainability

EJP2 grantees carried out activities to ensure the continuation of project activities in targeted communities after the grant period ended. In many cases, grantees developed useful products, such as guidebooks, videos, software, and curricula, that will continue to teach pollution prevention to residents, students, and businesses for many years to come. In addition, by helping communities and businesses connect with government and nonprofit technical assistance organizations, EJP2 grantees ensured that pollution prevention resources would continue to be accessible after the grant period ended. Lastly, grantees secured additional funding to supplement and sustain grant projects after EJP2 funding ended. Following are some examples of grantees that secured the continuation of project activities after the end of the grant period:

Because of the success of **Escambia County**'s outreach activities to residents, students, and businesses, county legislators established a permanent pollution prevention program to continue the EJP2 grant activities.

Montana State University Extension Service, which partnered with three tribes to improve tribal government waste management, influenced the Northern Cheyenne to commit significant tribal funds to implement their solid waste management plan.

Wichita-Sedgwick County Department of Community Health secured permanent funding for its program to work with small quantity generators of hazardous waste.

Harlem Environmental Impact Project received $3,000 from the New York City Council to continue grant activities after the close of the EJP2 grant.

B. Factors Contributing to Program Success

Regardless of the type of project conducted, EJP2 grantees repeatedly identified common factors contributing to their success during interviews. These strategies cross-cut the different types. Common "success factors" included:

The grantee thoroughly researched and understood its target audience.

Researching and understanding the target audience and the community helped grantees tailor their programs to community needs. Specifically, understanding a community's history with environmental justice, learning the most effective means of communication for that community, and gaining the community's confidence were vital to successful projects. While grantees such as the **Town of Meeker** achieved success by learning about the target audience, other grantees had to make changes to their projects midstream as a result of not understanding their audience. One grantee, for example, had planned to translate fact sheets into Cambodian, only to find that most adults in the community could speak but not read the language.

Grantees also stressed talking to community members to learn the local history. Finding out what efforts community members made to improve the local environment in the past, and if there was a history of joining together against pollution and other community problems, helped grantees assess their situation. One EJP2 grantee, for example, found that competing interests among the different environmental justice groups in the community impeded progress.

Meeker's P2 Committee Helps Obtain Buy-In

The Town of Meeker, Colorado, established the Meeker Pollution Prevention Committee at the outset of its grant. The committee helped project coordinators obtain buy-in from the community, because its members consisted of people from many different areas of the community. These members then passed along information to their friends and neighbors and encouraged their involvement. Meeker credits the committee and community buy-in as critical to achieving good attendance at its waste prevention seminars and for collecting substantial amounts of waste material to sustain a new recycling center created under the grant.

The grantee involved community stakeholders up front.

Many successful grantees attributed their positive results to obtaining buy-in from community leaders and other key project partners before getting started on their grant projects. The input and recommendations from the community leaders helped grantees to structure successful projects. **Metropolitan Energy Center**, for example, credits its community visioning process as a key element of its success. Grantees also noted the importance of including all the key stakeholders and partners that will affect the project's success. One grantee, for example, worked hard to develop a watershed protection module for the local science curriculum, only to find that the science curriculum was quite full. The grantee determined that the course would have yielded better and more permanent results had it been designed as an elective course rather than part of an already full curriculum. Earlier teacher involvement might have helped prevent this problem.

Guiding Sustainable Urban Development

The **Metropolitan Energy Center** created a guidebook on sustainable urban development to help other community groups around the country replicate its experience improving the environment of the low-income neighborhood of Westside, Missouri. Metropolitan Energy spent the first 6 months of its project getting to know community members and their objectives. The grantee found the most productive neighborhood visioning meetings occurred when it sponsored picnics or had impromptu porch meetings—planned meetings at designated locations were not widely received. At the impromptu porch meetings, Metropolitan Energy worked with participants to establish neighborhood leaders, who formed a steering committee and later an advisory committee for the program. These leaders met monthly to monitor progress and to ensure activities were held in accordance with the goals outlined by the community. Metropolitan Energy believes the picnics and porch meetings built lines of communication that did not exist in the community, and as a result, increased resident participation in creating a sustainable development plan for their community.

The timing of obtaining input from community members and key stakeholders, however, can be difficult for some grantees. Before approaching communities to obtain community buy-in, project planners want to be sure that they have funding for the activity. At this point, however, they do not know for sure if they would receive funding through EJP2 or other sources. Some organizations found that discussing project goals and promising changes to community members resulted in disappointment and reduced their credibility if they did not receive funding for the project. Waiting to involve the community until the organization received approval from EPA, however, resulted in less-informed project plans.

The grantee built on existing relationships and partnerships that had already earned the community's trust.

Grantees cited partnering with organizations, such as trade associations that already have the trust of business communities, as another key to successfully working with groups that

mistrust outsiders. **Ecology Action**, for example, worked with the Korean Community Center of the East Bay (KCCEB) to develop two 4-hour workshops for Korean dry cleaners in Northern California. Reaching the Korean-American community is especially important when trying to reach dry cleaners; Korean Americans make up approximately 60 percent of all dry cleaners in California. Furthermore, this community often mistrusts regulatory agencies and environmental organizations, according to Ecology Action. Without assistance from the Korean Dry Cleaners Association of Northern California (KDA) and KCCEB, Ecology Action believes that it would not have been able to gain the trust of Korean-American dry cleaners. When communicating with dry cleaners, Ecology Action had more success when callers stated they were phoning on behalf of KDA than when identifying themselves as an environmental organization only.

Not only do partnerships with trade associations help build trust, grantees said that they also help provide access to the target audience. **Dunbar Association**, for example, partnered with the Pan-African Business Association (PABA) to reach small businesses in Syracuse, New York. Using PABA's mailing list, Dunbar sent brochures to businesses explaining the pollution prevention program and advertised in PABA's community center newsletter. Through this effort, Dunbar reached 60 businesses and conducted onsite visits. It is important to note, however, that given the transient nature of small businesses in low-income communities, there were still a significant number of businesses that were not members of trade associations. To reach these businesses, Dunbar conducted onsite visits to discuss pollution prevention methods in person.

Roxbury Community College, in association with the **Tellus Institute**, found partnerships with trade associations very valuable in their work as well. Roxbury/Tellus held their workshops with sponsorship from the Massachusetts Auto Body Association, the Massachusetts Fabricare Association, and the Massachusetts Printers Association. The grantees found it especially difficult to recruit businesses that were not members of these associations.

Partnerships Often Make or Break Success

Garden Resources of Washington realized it had to do much more than distribute flyers to get the community involved in its urban garden project. By linking one of the demonstration sites to a local high school, the grantee immediately found a committed organization. Numerous students eagerly volunteered for the project, as their work on the demonstration site fulfilled their community service obligations for school. In addition, through participation in the project, some students helped educate their parents about environmental issues. The grantee was able to attract numerous volunteers for its half-acre farm through existing community groups.

The grantee combined its activities with existing community events and festivals.

Whether planning a workshop for small businesses or a community meeting, planning activities in coordination with existing events helped grantees to attract participants. Most grantees that planned stand-alone meetings, events, and workshops found few attendees. Grantees found that combining their events with other regularly scheduled meetings or events helped improve attendance. The **City of Boston's Office of**

Environmental Health, for example, used this approach to improve attendance at workshops held in conjunction with its new video on auto repair pollution prevention. Similarly, **Miami-Dade County** found that bringing workshops to industrial parks worked better than asking the small businesses to come to the grantee. The **Metropolitan Energy Center** found the same was true for its community meetings.

C. Grantee Advice for Motivating Behavioral Change

Throughout the course of their work, EJP2 grantees identified a number of recommendations to help other organizations conducting similar projects motivate behavioral change. This advice applies regardless of the type of project initiated.

Contact the target audience on multiple occasions—face-to-face contact works the best.

One EJP2 grantee diligently collected information on pollution prevention resources available locally, statewide, and nationally and distributed the resource list to local businesses. When calling to follow up, the grantee was surprised to learn that none of the businesses called the resources or implemented pollution prevention activities as a result. Taking action as a result of a single letter, flyer, or workshop rarely occurred among audiences targeted by EJP2 grantees. Grantees ranging from the **Tri-County Health Department** in Colorado to the **Korean Youth & Community Center** (KYCC) in Southern California to the **Northeast Waste Management Officials Association** (NEWMOA) in Massachusetts all found that multiple and personal contacts worked best. For Tri-County Health, businesses were much more likely to participate in its voluntary program when they received a personal visit rather than a mailing. KYCC found that, in spite of the materials they prepared for its demonstration workshop on wet cleaning, no dry cleaners would convert to wet cleaning based on one workshop. Ecology Action, which conducted a similar project, however, found that after repeated contact and demonstrated success of their peers, seven dry cleaners did convert to wet cleaning after the end of the EJP2 grant period.

Broward County Piggybacks for Success

After few people attended pollution prevention workshops sponsored by the **Broward County Department of Natural Resource Protection** (DNRP), the Department decided that if it could not get residents to the workshops, it would take the workshops to the people. DNRP attended home owners association meetings within the community to make pollution prevention presentations and introduce its tree planting and roof coating projects. At these meetings DNRP was able to explain its initiative to community leaders and gain their support, which gave it credibility and increased acceptance by community residents.

NEWMOA geared its outreach and education materials for local health, fire, and safety inspectors of auto repair shops. NEWMOA found that local inspectors often have personal contact with small auto repair shop managers and owners from routine shop inspections and know and trust them. By educating local inspectors about pollution prevention and compliance assistance for auto repair shops, the officials can bring this information to the smaller auto repair

shops during the inspections, saving the shop owners the time required to locate, obtain, and learn pollution prevention and environmental compliance information on their own.

> *"Ultimately the most successful outreach tool will usually be one-on-one contact rather than mailings or letters. This is how trust is built among organizations."*
>
> **—Center for Hazardous Materials Research**

Grantees also stressed the importance of contacting the program participants and the target audience on several occasions to maintain momentum and spur additional interest. In its work in Philadelphia, Pennsylvania, the **Delaware Valley Clean Air Council**, for example, found that the more contact it maintained, the more involved participants became. In another example, the **Fond du Lac Reservation Business Committee** found that in order to be successful, service providers cannot just go to the businesses one time and expect behavior to change.

When possible, use "hands-on" activities and visual projects to educate.

Grantees found that, regardless of audience—students, farmers, dry cleaners, auto shop workers, and residents—all learned better through hands-on activities rather than classroom-type presentations. School letter writing campaigns, school and home energy audits, and geographic information system (GIS) mapping helped promote student involvement. **Isles, Inc**., for example, found that hands-on activities are a good addition to lectures. The students really appreciated the opportunity to do an actual energy audit. The same principle held true for agricultural and business projects. When owners, workers, and farmers saw pollution prevention technologies in action, they became more receptive to implementing them in their respective workplaces. **Wichita-Sedgwick Department of Community Health**, which conducted numerous workshops on its small quantity generator pollution prevention project, found that even though many people attended these workshops, onsite demonstrations or technical assistance would have been a more effective means of communication.

"Lack of One-on-One Contact Inhibited Our Success"

The **Mid-America Regional Council**, which sought to obtain input from the residents of Kansas City in the local environmental pollution prevention planning processes, believes a lack of personal contacts with community members limited its success. The grantee said it felt that if more one-on-one contact had been initiated earlier in the program, more local leaders would have become involved. The grantee did gain the support of a large number of community leaders; however, their participation in the workshops was disappointing. If personal contact had been made with the leaders in the early stages of grant design, the grantee believes that they might have been willing to commit more time to the program.

Similarly, other grantees noted that visual displays helped engage their target audience. The **Androscoggin Valley Council of Governments** (AVCOG), for example, used an innovative display showing how pollutants travel from homes, businesses, and communities into ground-water drinking supplies. The simple display used food coloring in water to show pollutant pathways. AVCOG found that people really were interested in the display and readily learned from it.

Partnerships: A Key to Success

The **Lincoln-Lancaster County Health Department** (LLCHD) attributed its success to an alliance with its community partners. According to LLCHD, "By using people who were trusted by community members, residents were more receptive than they would have been had an outsider approached them." The contacts also had the advantage of cultural familiarity—knowing how to approach their community to achieve project goals. As a result, LLCHD generated a high level of interest in pollution prevention within four minority communities. LLCHD and its partners held community meetings to discuss neighborhood environmental concerns, trained residents to conduct pollution prevention outreach within their own communities, provided pollution prevention technical assistance to small businesses, and translated and distributed a large number of outreach materials.

Include some type of awards and recognition component.

Grantees noted that all people—from school children to business people to local residents—thrive on recognition for their efforts to protect the environment. One of the most successful business assistance grantees, the **Elizabeth River Project**, credits recognition and friendly competition as the best way to spur pollution reduction. Elizabeth River awarded recognition "stars" to participating businesses that reported reductions through its voluntary program.

Grantees also indicated that recognizing achievements often results in other benefits such as increased community awareness of environmental issues and increased communication. In Somerville, Massachusetts, for example, peer leaders participating in the pollution prevention internship program received citations for demonstrating leadership, intelligence, and hard work during the 200 hours they completed under the EJP2 grant. The event, broadcast on cable television and covered by the *Boston Globe*, helped increase community awareness of environmental justice issues.

The **University of Louisville's** Citizen Award for Pollution Prevention enabled community members to acknowledge the efforts of local businesses and fostered communication between the community and local industry.

Encourage small, incremental changes with demonstrated cost savings and benefits.

The most successful EJP2 grantees encouraged small, incremental changes with demonstrated cost savings and benefits. Grantees told EPA that this tip is particularly important

for audiences whose livelihoods depend on success and cannot take significant risks (e.g., dry cleaners converting to wet cleaning, farmers converting to organic farming). Identifying smaller changes with cost savings, however, helped businesses begin implementing pollution prevention activities. The **Elizabeth River Project**, for example, found that it was able to encourage businesses to participate by working with them to undertake small projects. Elizabeth River recruited businesses by publicizing the small, visible environmental improvements achieved by other participants.

Personal Contact and Flexibility Improves Attendance

To entice business owners to attend pollution prevention demonstrations, **Mobile Outreach for Pollution Prevention** (MOPP) partners made personal phone calls or visits to businesses to tell them about MOPP. Though time constraints did not always permit a call, partners noted an increase in attendance when this personal contact was made. MOPP also sponsored an open house, which gave participants the freedom to visit the MOPP at their convenience. This flexible program attributed to the increased numbers of participants. MOPP reached more than 300 businesses and demonstrated pollution prevention equipment used in solvent distillation, removal of residual oil from oil filters, parts washing, and enclosed paint gun cleaning.

Time and time again grantees cited the demonstration of cost savings as a key element to their success. The **Missouri Energy Resources Project**, for example, had difficulty persuading the local school board to allocate additional funding needed to implement its recommendations to improve energy efficiency in the 22 schools participating in the grant project. Eventually, the grantee convinced the school board that the proposed cost savings resulting from implementing recommendations would make the effort worthwhile. Each of the participating schools installed a new lighting system in addition to recommendations developed under the grant.

Focus on individuals who can make decisions to change practices (e.g., business owners rather than employees).

Several grantees noted the importance of making sure the target audience has the authority to act on the information they receive through workshops, trainings, and meetings. The **Association for Community-Based Education**, for example, trained farmworkers on integrated pest management techniques. While the workers can learn, they do not have the power to change practices as the farmowners do. Alternatively**, Citizens for a Better Environment** (CBE) worked with environmental managers empowered to make decisions. Acme Steel's environmental manager, for example, was very responsive to concerns about environmental problems stemming from the company's operation, which included toxic releases of air and dust emissions from the company's coal piles.

D. Difficulties Encountered

Grantees faced numerous challenges when implementing their projects. Many had difficulty overcoming the following barriers.

Small businesses are hard to reach.

Many grantees found it difficult to work with small businesses on pollution prevention projects for a variety of reasons.

Shipyards Say No to Pollution Prevention in New Orleans

The **Louisiana Environmental Justice Project** aimed to work with community members and shipyards to prevent pollution. Despite numerous contacts, however, no industry representatives were willing to support source reduction at shipyards. According to the grantee, industry seemed afraid of or indifferent to the issues presented by an unknown "environmental action group."

Businesses lacked staff to focus on environmental issues. Grantee **Center for Hazardous Material Research** (CHMR) noted that often these small companies do not have any environmental expertise, and the current staff, whether it is a maintenance worker or an owner, do not have much time for anything beyond ensuring compliance, if that. To overcome a lack of interest in pollution prevention, CHMR offered its services to numerous businesses, knowing that only a few would ultimately accept.

Businesses mistrusted pollution prevention service providers. Businesses feared that outsiders might find violations and report them to the authorities. According to **El Puente**, in the economically disadvantaged community of Greenpoint-Williamsburg, New York, "Businesses in poor, minority urban areas are often small, not regulated well, non-unionized, and use immigrant labor. These businesses thrive on being anonymous. They do not have the money to comply with the more than 70 city regulations and do not want to take the risk of having illegal practices exposed. Working with these businesses takes a long time to build a relationship of trust and to enable grantees to develop the organizational capacity for addressing these issues."

Businesses were highly transient. In its followup visits to Opa-locka small businesses that received technical assistance, grantee **Miami-Dade County** often found empty warehouse bays and no forwarding address. In its final survey of 184 facilities that received assistance and responded to an original survey, more than a quarter of the business (50 businesses) were no longer in operation during the final survey. Some of these businesses reopened 1 or 2 months after they closed within a few blocks of their original location. This movement from location to location makes consistent permitting and educational assistance difficult. Upon consulting the county's permitting section, the

grantee learned that this is a common occurrence in Opa-locka, as well as other low-income communities.

The loan projects had an especially difficult time recruiting small businesses to participate in pollution prevention loan programs. In some cases, the grantees had difficulty getting the businesses interested in pollution prevention loans at all. In the case of **Working Capital**, for example, the grantee promoted its new pollution prevention program as part of its existing loan program with a kick-off event, direct mail, and participation in community events. Even so, the grantee had difficulty recruiting businesses to participate. In response, Working Capital refocused its marketing strategy by highlighting the economic benefits of practicing pollution prevention, such as reducing costs through improved business efficiency, rather than focusing on the environmental benefits. In other cases, businesses in disadvantaged communities could not qualify for loans due to compliance problems. The **Bowdoin Street Health Center** (BSHC), for example, found that some auto shops in the immigrant communities established themselves without appropriate permits and operated for some time before government officials realized the shops were operating illegally. BSHC was unable to provide loans to auto shops because none of shops was able to comply with environmental regulations, no matter how much technical assistance was provided to them.

Mill Creek Had Difficulty Reaching Businesses

Very few businesses responded to notices of the pollution prevention challenge grants offered by the **Rivers Unlimited Mill Creek Restoration Project**. The grantee realized that this opportunity was hidden amongst announcements of several other opportunities. By making the announcement more prominent, the grantee was able to elicit at least a few responses from interested businesses.

Linking Pollution Prevention to Community Concerns Fosters Success

When promoting pollution prevention to residents, **Escambia County, Florida**, linked prevention with issues important to the community, such as aesthetics and crime. The county worked with community development associations and government officials to ensure pollution prevention efforts were integrated into development plans for the community or done concurrently with other development efforts. The grantee also presented information on the linkages between prevention and community concerns at neighborhood association meetings and at other community development events. For example, the grantee made a presentation on pollution prevention in the home of volunteers gathered for community cleanups before the cleanups actually began.

Communities are often more interested in cleanup than prevention.

In some cases, the pollution prevention solutions offered by grantees did not align with community priorities. In order to obtain buy-in from communities, several

grantees had to defer pollution prevention projects and instead address specific community concerns, such as rodents, litter, or other existing pollution problems. The **University of Cincinnati**, for example, found that residents of the Lower Price Hill community were not concerned or aware about pollution prevention solutions. Residents saw their immediate needs as reducing litter, removing graffiti, and beautifying their neighborhood. The grantee overcame this problem by working with the community to fulfill these goals, and later keeping them aware of pollution prevention as a possible solution.

The same finding holds true for businesses. While grantees would initially hope to assist the businesses in preventing pollution, they found so many environmental violations that they had to help the businesses become compliant. The **Greater Laredo Development Foundation**, for example, found that 70 percent of the 30 freight companies visited were violating various hazardous materials regulations. The grantee educated and trained local businesses (i.e., trade-handlers, freight forwarders, trucking companies) on how to comply with the regulations and prevent accidents involving hazardous freight.

Uncertain EPA funding schedule disrupts project planning.

Some grantees noted that the uncertainty of EPA's schedule for awarding the EJP2 grants made it difficult for them to coordinate with project partners and retain their commitment and enthusiasm for participating in the proposed project. Given that grant projects work best when the grantees obtain buy-in early from all stakeholders and community members, the uncertainty of the EPA funding schedule exacerbated this problem.

Poor project planning limits success.

Some grantees failed to do the proper background research, which inhibited their success. The **New River Highlands Conservation and Development Council**, for example, had hoped to reach owners of property in the watershed through students at a local school. The main sources of pollution for the watershed are soil erosion and runoff from cattle. As it turned out, however, the students' parents did not own land along the river and the grantee had difficulty reaching the landowners. Better preliminary research into the

EPA Needs to Balance Accountability and Flexibility

According to one grantee, the **Clean Water Fund** (CWF), EPA needs to determine a new way to hold EJP2 grantees accountable as well as give more leeway to allow project activities not originally included in the grant proposal. The grantee commented that many EJP2 grantees are small organizations that do not have the expertise or time to complete all of the necessary paperwork accurately to request changes in project work. EJP2 grantees need more support from EPA to facilitate adjustments to grant project work. CWF believes it is the nature of EJP2 work for unexpected circumstances to occur that prevent planned project work from happening or that make other types of project work more sensible than planned activities.

demographics of the school and community might have helped the grantee to design a more effective project. As noted above, good preliminary research often resulted in successful projects.

Other grantees had misconceptions of the EJP2 grant program as a funding source. At least one grantee assumed that it would receive annual funding through EJP2 and structured its project accordingly. When the organization did not receive funding in subsequent years, the project faltered.

Lack of staff focusing on the EJP2 project can slow project progress and limit grantees' ability to continue project activities beyond the grant period.

Although hiring new staff takes time, grantees found that projects otherwise suffered because staff were overburdened with too many responsibilities. The **Turtle Mountain Band of the Chippewa Indians**, for example, did not receive enough EJP2 funding to hire a P2 Coordinator as originally planned, so all grant responsibilities fell on one staff person. This person, who was also working on three other grant projects at the same time, had difficulty meeting the demands of all projects.

Those grantees that allocated full-time staff to the project were better able to meet their project goals. The **Wichita-Sedgwick County Department of Community Health**, for example, said that it needed to hire a full-time staff person to effectively administer the pollution prevention program. According to the grantee, the program required more attention and detail than was possible as a part-time activity or if it was added to someone's "regular" job. Ultimately, Wichita-Sedgwick obtained permanent funding for the position.

Other grantees feared that without a full-time staff person, the project would not continue beyond the EJP2 grant. **Montana State University (MSU) Extension Service**, for example, worried that two of the three tribes participating in its community education project would not continue activities upon completion of the grant. One of the participating tribes did hire a full-time

Insufficient Staff and Other Funding Sources Limit Post-Grant Success

The **Metropolitan St. Louis Sewer District** established a curbside recycling program in a low-income, minority neighborhood of St. Louis, Missouri. While 6.5 tons of recyclables were collected from nearly 700 community members during the grant period, the collection program faltered once EJP2 funding ceased. The grantee stated that in order for the program to be truly successful, alternate sources of financing should have been found. Too much reliance was placed on the grant money. The grantee also identified a second challenge: there was insufficient funding to sponsor someone full-time. The project's success was limited by staff working on the curbside program in addition to other duties.

person to work on the project, which encouraged MSU that activities would continue after EJP2 funding expired.

E. Findings by Project Type

Sections III through IX provide detailed findings and analysis for the seven categories of grant projects (i.e., helping small businesses prevent pollution in communities, fostering partnerships between industrial facilities and communities, educating communities on pollution prevention, promoting efficient resource use within communities, fostering youth education and involvement, demonstrating agricultural pollution prevention, and improving tribal environments). These sections summarize grantee accomplishments, provide snapshots of a variety of successful and unsuccessful grant projects, and outline effective strategies for project success, based on feedback from grantee interviews.

SECTION III—HELPING SMALL BUSINESSES PREVENT POLLUTION IN COMMUNITIES

Small businesses such as auto repair shops, dry cleaners, and printers often generate small quantities of hazardous waste that may threaten the environment and the health of residents and workers in some communities. Many low-income and minority neighborhoods have a large share of such facilities[6] and, according to grantees interviewed for this study, face three major challenges when trying to prevent pollution from small businesses:

Small businesses have few employees and resources, which limits the amount of time they can spend learning about environmental regulations, government technical assistance programs, and pollution prevention measures.

Small businesses have limited financial resources, which makes them more wary of purchasing new pollution prevention equipment.

Small businesses are often transient businesses—they have high employee turnover or they temporarily close due to economic difficulties—which limits the community's ability to establish working relationships with them.

EJP2 grantees addressed these challenges through four types of projects. First, grantees developed voluntary partnership programs where participating businesses identified and implemented pollution prevention goals in exchange for free technical assistance and public recognition for their efforts. Second, grantees carried out demonstration projects to show the cost-effectiveness and environmental value of pollution prevention technologies and took additional measures to ensure the adoption of the technology by small businesses. Third, grantees helped small businesses finance new pollution prevention equipment purchases through loan programs. Fourth, grantees carried out technical assistance and training programs that provided small businesses with the skills they need to safely handle and reduce the usage of hazardous materials and reduce harmful air and water emissions. Most of the grantees targeted small auto repair shops and dry cleaners. Other targeted sectors included printers, shipyards, electroplating businesses, incinerators, janitors, chemical manufacturers, food service businesses, and petroleum refineries.

A. Accomplishments

From 1995 to 1997, 27 EJP2 grantees carried out pollution prevention projects that provided technical assistance and training to small businesses. Accomplishments for each type of project are described below.

Voluntary Partnership Programs

[6] Percival, Robert V., ed., Alan S. Miller, Christopher H. Schroeder. 1992. Environmental regulation: law, science, and policy (Law school casebook series). Boston, MA: Little, Brown, and Company.

As a result of the two voluntary programs carried out by EJP2 grantees, 82 businesses set pollution prevention goals, and 27 implemented them. Although both programs initially focused on small businesses, the grantee that achieved the most success expanded its recruiting efforts to larger businesses. In this case, one business reduced hazardous waste by nearly 2 million pounds, another limited styrene emissions by 95 percent, and a third reduced toxic chemicals covered by the Emergency Planning and Community Right-to-Know Act by 85 percent.

Demonstration Projects

EJP2 grantees carried out 83 demonstrations of pollution prevention technologies to 159 businesses. Demonstration projects focused on wet cleaning, water-based auto parts cleaners, and diesel bus air pollution control. One successful demonstration proved water-based auto parts cleaning systems to be just as effective as existing chemical-based systems and showed that conversion to water-based cleaning systems would save auto shops money—an estimated $200 per ton of volatile organic compound (VOC) reduced. Impressed by the demonstration results, the South Coast Air Quality Management District (SCAQMD) began to require use of water-based parts cleaners by all auto repair businesses within its jurisdiction. SCAQMD estimates this will prevent 10 tons of VOC emissions daily within a four-county area that includes Los Angeles County. Grantees carrying out demonstration projects also created outreach materials to facilitate adoption of pollution prevention technology by businesses. These materials, which should continue to be useful for other organizations planning similar demonstrations, include a bilingual video, marketing handbook, case study, fact sheets, and information packets.

Loan Programs

Loan programs were less successful in preventing pollution: of the five loan programs carried out by EJP2 grantees, only one program was successful in awarding loans to businesses for purchase of pollution prevention equipment. This program awarded loans, collectively worth $120,000, to four businesses. As a result, the businesses reduced toxic air emissions by approximately 70 percent. EJP2 grantees had difficulty awarding loans to small businesses for a number of reasons, including businesses' fear of taking a financial risk, businesses' ineligibility for loans due to environmental violations, and grantee inexperience with lending money to small businesses in low-income communities.

Technical Assistance and Training Programs

Grantees carrying out general technical assistance and training programs did not measure the amount of pollution prevented through their work. Most grantees, however, measured the number of activities conducted and the number of businesses reached through their efforts.

The 15 grantees that carried out general technical assistance programs reached 238 businesses through onsite visits and pollution prevention audits.

The most successful grantee in this category provided onsite visits to 124 businesses, and, as a result, 61 of those businesses implemented pollution prevention, recycling, and proper disposal measures.

Another successful grantee certified 217 workers to handle hazardous waste materials safely.

The grantees reached 2,013 additional people representing at least 105 businesses through 94 conferences, seminars, workshops, and presentations.

Lastly, grantees developed resource guides, fact sheets, brochures, and tool kits, which reached at least 108 businesses.

Some of the 27 grantees targeting small businesses developed pollution prevention products that should prove useful for some time beyond the grant period. Pollution prevention products include the following:

Checklist for local inspectors

Expert system software program for printers

Handbook for pollution prevention in painting

Training curriculum for peer groups of businesses

Bilingual video for auto repair shops.

As an example of the potential impact of these products, a training curriculum developed by an EJP2 grantee (originally used to help qualify small businesses for pollution prevention loans) was adopted by the New Mexico Environment Department for use by small businesses in its Green Zia Environmental Excellence Program, a voluntary pollution prevention program.

B. Snapshots

Voluntary Programs

Norfolk, Portsmouth, and Chesapeake, Virginia: *Assisting Businesses That Volunteer to Prevent Pollution* (3-97-2)[7]

By expanding a voluntary program that encourages businesses to prevent pollution, the Elizabeth River Project (ERP) helped businesses reduce a significant amount of toxic emissions, raised community awareness of the value of pollution prevention, and provided public recognition of businesses that implemented pollution prevention measures. Through the voluntary River Stars program, ERP helped 60 businesses set pollution prevention goals, leading the way for 12 of these businesses to implement pollution prevention measures that significantly reduced air and water emissions in a low-income, African-American community in southern Virginia.

After recruiting local shipyards, auto repair shops, and printers to join the River Stars program, ERP helped the businesses identify and implement pollution prevention goals through onsite visits, training conferences, and a hotline. In one instance, ERP held a conference specifically on shipyard pollution prevention. The conference, attended by 50 local businesses, featured technical seminars, in addition to speakers from a shipyard trade association and the state regulatory agency.

In addition to assisting businesses, ERP coordinated a variety of neighborhood improvement projects. The projects, such as marsh restoration, trash cleanup, and tree planting, included residents and employees of local businesses. As a result of the projects, ERP raised community awareness of the importance of environmental responsibility among community members, helping make public recognition of business pollution prevention achievements much more meaningful to both businesses and residents.

Demonstration Projects

Los Angeles, California: *Demonstrating the Effectiveness of Pollution Prevention* (9-95-2)

By conducting demonstrations of water-based auto parts cleaning technology at volunteer auto repair facilities in inner-city Los Angeles, the Institute for Research and Technical Assistance (IRTA) proved water-based parts cleaners are a feasible and cost-effective alternative for cleaning auto parts. IRTA's carefully conducted study convinced the South Coast Air Quality Management District (SCAQMD) to promulgate a new regulation that requires repair and

[7] EPA coded each grant project for easy reference with project summaries throughout the document. Table B-2 in Appendix B includes an alphabetical list of projects and the associated code.

maintenance cleaning operations in their jurisdiction (Los Angeles, Orange, Riverside, and San Bernardino counties) to adopt water-based cleaners. IRTA estimated that auto repair facilities affected by the ruling will convert 40,000 solvent cleaning units to water-based systems, reducing 10 tons of solvent emissions each day in SCAQMD's jurisdiction, twice the level of emissions from a large oil refinery. IRTA indicated the change saves about $200 per ton of volatile organic compounds (VOCs) reduced. One facility expected to save $1,400 per cleaning unit after the switch.

Before initiating the demonstrations, IRTA conducted research to determine ways to improve existing water-based auto parts cleaners to make them more effective and affordable. IRTA then worked with five equipment manufacturers and vendors to improve their water-based parts cleaners to meet IRTA's specifications. IRTA conducted 24 demonstrations of the improved technology (consisting of different combinations of equipment and water-based formulations) at 21 volunteer auto repair facilities in inner-city Los Angeles.

Rural Communities in Idaho: *Taking Pollution Prevention on the Road* (10-95-7)

The University of Northern Iowa's Waste Reduction Center (IWRC) developed the Mobile Outreach for Pollution Prevention (MOPP), a mobile home that travels around the country providing pollution prevention and waste prevention information to small, rural communities. Using EJP2 grant funds, the MOPP sought to collectively organize and implement pollution prevention outreach programs focusing on small businesses in rural and urban areas and on tribal lands in Idaho. The IWRC tailored the MOPP to suit the needs of its target audience by using surveys administered to automotive businesses. The MOPP toured continuously for 8 weeks to demonstrate equipment used in anti-freeze recycling, solvent distillation, removal of residual oil from oil filters, parts washing, and enclosed paint gun cleaning. State-specific environmental regulatory compliance information was also distributed to participants.

The MOPP also answered questions raised by participants and offered technical assistance. To create greater interest in the MOPP, staff personally visited automotive shops within selected towns and invited them to watch the demonstrations. The MOPP visited 31 communities and performed 34 demonstrations for an estimated 425 participants.

Midwest Communities: *Conducting Preliminary Research Prior to Carrying Out Full-Scale Demonstrations* (7-97-5)

The University of Northern Iowa carried out two demonstrations of the Hydro Power Pak™ after the inventor approached the grantee. The inventor believed the device could be installed on diesel-fueled buses to reduce their air emissions and meet the urban bus retrofit requirements specified in Section 219(d) of the Clean Air Act Amendments. Although the demonstrations showed the device could reduce hydrocarbon and particulate emissions by up to 9 percent, it did not prove effective enough to meet the standards set by Section 219(d). The

grantee noted that, had it had more preliminary information on the product, they would not have conducted a full-scale demonstration.

Loan Programs

Minority and Low-Income Communities in Washington State: *Helping Businesses Finance Pollution Prevention* (10-95-2)

Cascadia Revolving Fund (CRF) created the Pollution Prevention Lending Program and provided four loans to Korean-owned dry cleaning businesses to help them purchase pollution prevention equipment. The $120,000 worth of loan money is expected to reduce the dry cleaners' air emissions by 70 percent every year. In addition to awarding loans, CRF reached out to small businesses from many different sectors, providing them with advice on financial strategies for preventing pollution and achieving environmental compliance. The funding from the EJP2 program served as a "loan loss reserve" that allowed CRF to award loans to businesses lacking collateral. As businesses paid back the loans, CRF could make new loans.

CRF focused on dry cleaners after conducting research on industries that were mainly comprised of small businesses and were facing regulatory pressure to minimize environmental impacts. CRF promoted the Pollution Prevention Lending Program by distributing information at a Waste Information Network fair, co-sponsoring an environmental seminar, and sending out targeted mailings.

General Technical Assistance and Training Programs

City of Opa-locka, Florida: *Building Trust With Small Businesses* (4-95-4)

In the low-income community of Opa-locka, Florida, the Miami-Dade County Department of Environmental Resources Management (DERM) provided nine onsite pollution prevention assessments to small businesses, held 11 workshops during business hours and near business locations, and revisited businesses to provide eight followup workshops. Through the workshops, DERM taught pollution prevention strategies to 160 businesses and informed them that DERM provided nonregulatory technical assistance. In addition to teaching pollution prevention measures, the workshops and onsite assessments helped DERM build trust with the businesses, making future collaborative work more likely.

Seattle, Washington: *Trying to Persuade Businesses to Reduce Pollution* (10-97-2)

To reduce community exposure to industrial pollutants in a low-income Seattle neighborhood, the Community Coalition for Environmental Justice (CCEJ) worked with residents to identify pollution prevention strategies for local businesses and encouraged business owners to implement these strategies. To begin, CCEJ identified local pollution sources using EPA databases, such as the Toxic Release Inventory database. Next, CCEJ worked with

residents to design pollution prevention strategies for local businesses and identify government and nonprofit organizations that could provide technical assistance to these businesses. CCEJ then met with businesses and provided them with suggestions for preventing pollution, based on its work with residents. In spite of CCEJ's efforts, however, businesses did not implement pollution prevention measures. CCEJ believes this was because businesses did not have any regulatory incentives to change. Other EJP2 grantees in similar situations, however, were successful in persuading businesses to implement pollution prevention measures. These grantees attributed their success to demonstrating the cost savings of pollution prevention to businesses or recognizing business pollution prevention achievements.

C. Insights and Strategies for Project Success

Voluntary Programs

Keep the voluntary program highly structured. Specific criteria and standards for receiving recognition in a voluntary program keep businesses motivated to participate in the program. ERP's River Stars program included a ranking system (one, two, or three stars). Businesses could progress from one to two to three stars only after carrying out specific pollution prevention activities, such as employee education. ERP found that the structure created a competitive, yet friendly, spirit among participating businesses, encouraging them to progress in their pollution prevention efforts.

Find a group of volunteers to provide technical support. To improve the level of participation in its voluntary program for auto repair shops in low-income Denver communities, the Tri-County Health Department encouraged pollution prevention equipment (high-volume, low-pressure paint guns) suppliers to provide additional technical assistance to businesses interested in implementing pollution prevention measures.

Find a champion at each participating business. ERP, for example, identified a mid-level employee at a local shipyard to consistently encourage upper management to implement pollution prevention measures. Eventually, upper management invested in new pollution prevention technology.

Provide extra assistance to participating businesses to help document results accurately. EJP2 grantees found businesses needed a high level of assistance to help them document the results of their pollution prevention efforts. Otherwise, businesses might choose a measurement method that gives a poor representation of the amount of pollution they have prevented or select no method at all.

Demonstration Projects

Improve consumer awareness and increase demand for products and services provided through pollution prevention technologies. EJP2 grantees have found some businesses are hesitant to adopt pollution prevention technology because of fears that consumers will reject their services. Ecology Action, for example, learned that dry cleaners feared losing customers if they switched to wet cleaning technology. Ecology Action advised future grantees to make sure project activities address the need to educate consumers. The grantee noted a press conference is a good method for building consumer awareness and for publicizing local businesses using pollution prevention technologies.

Find businesses already using pollution prevention methods to demonstrate their economic feasibility. EJP2 grantees have collaborated with successful businesses that use pollution prevention to demonstrate to other businesses that adopting pollution prevention technology makes good business sense. The Korean Youth & Community Center (KYCC), which provided demonstrations of wet cleaning to minority dry cleaners in Los Angeles, collaborated with existing wet cleaning facilities to sponsor tours and demonstrations at their businesses. Although onsite demonstrations were important in raising the interest of dry cleaners, most were still hesitant to adopt wet cleaning technology. Repeated contact and financial assistance might be necessary to ensure adoption of demonstrated technology.

Work in partnership with manufacturers to develop new pollution prevention technologies. Without IRTA's preliminary studies, which determined how to improve existing water-based parts cleaners, and its collaboration with five manufacturers to meet its specifications, IRTA's demonstrations might not have proven this technology to be as cost-effective or comparable in performance to existing technology.

Changing industry behavior requires ongoing and time-consuming contact and collaborative work with all parties involved. To demonstrate the effectiveness of pollution prevention technology to industry, IRTA needed to provide ongoing contact and assistance to the auto repair facilities that volunteered to participate in the demonstrations. IRTA also worked hard to promote the results of its demonstrations to local government agencies.

Loan Programs

Leave loan programs to the experts. The most successful EJP2 loan programs were those created by financial institutions with a history of lending money to small businesses in low-income communities. EJP2 grantees without lending experience were unsuccessful in distributing pollution prevention loans to businesses in low-income communities. The Cascadia Revolving Fund (CRF), a well-established community development financial institution, used EJP2 grant funds to develop a Pollution Prevention Lending Program that encouraged the adoption of pollution prevention

strategies by small businesses. CRF demonstrated its expertise by establishing specific requirements for obtaining loans and targeting its outreach program to dry cleaners.

Target receptive industry sectors for loans. Some small businesses are more likely to seek loans to implement pollution prevention than others. EJP2 grantees that targeted their limited resources toward receptive industry sectors found more success than those that did not have targeted loan programs. CRF, for example, researched various industry sectors to determine which small businesses were facing future regulations that could require substantial capital improvements. As a result of its research, CRF concentrated its resources on dry cleaners.

General Technical Assistance and Training Programs

Workshops must be highly promoted, focused, convenient, and rewarding for small businesses to attend. EJP2 grantees generally found it difficult to attract small businesses to pollution prevention workshops. Grantees that succeeded in attracting small businesses to workshops offered them at a convenient time (e.g., evenings) or place (e.g., business sites), provided door prizes and free meals, conducted extensive promotional activities, made followup phone calls to individual businesses, and focused workshops on a particular industry or regulatory requirement.

Collect measurement data before and during the project. Collecting data on the level of knowledge of pollution prevention or amount of pollution prevented before and after EJP2 projects is a difficult endeavor. The Local Government Commission (LGC) suggested collecting pre-project data as early and often as possible. LGC collected much of their pre-project data through their preliminary research activities such as onsite interviews with janitorial businesses. To collect data on changes in level of awareness or behavior changes, LGC included a post-project survey card in product kits it distributed to janitorial businesses and their customers.

Continue the project beyond the grant period. EJP2 projects can continue to have a positive effect on small businesses when grantees carry out activities to help perpetuate pollution prevention beyond the grant period. EJP2 grantees worked with local governments to gain permanent funding for their programs or to make the use of their product a requirement for businesses to receive permits (e.g., viewing a video on pollution prevention techniques in auto repair shops). The Wichita-Sedgwick County Department of Community Health (WSCDCH) used EJP2 grant funds to educate small businesses in Wichita, Kansas, on the latest pollution prevention techniques and encouraged them to participate in a small quantity generator hazardous waste reduction program. As a result of the program's success, the county government allocated funds to support the program on a full-time basis.

Raise public awareness of the importance of business pollution prevention.
Technical assistance programs work best when businesses receive positive feedback from the community for their pollution prevention activities. The University of Louisville, for example, set up a Citizen Award for Pollution Prevention program, in which residents of the low-income West End community of Louisville reviewed local industry practices and selected recipients for pollution prevention achievement awards. By including residents in the award process, the grantee raised public awareness of the importance of pollution prevention to the community, which in turn encouraged businesses to seriously consider pollution prevention measures. As a result of the awards program, businesses not receiving awards approached the University of Louisville for pollution prevention implementation assistance.

SECTION IV—FOSTERING PARTNERSHIPS BETWEEN INDUSTRIAL FACILITIES AND COMMUNITIES

EJP2 grantees helped communities define their environmental concerns and communicate them to local industries, while providing technical assistance to local industrial facilities to facilitate changes. EJP2 projects supported collaborative efforts such as Good Neighbor Dialogues among communities and local industries and helped residents gather and interpret Toxic Release Inventory and other data to identify industrial pollution concerns and support local pollution prevention efforts.

A. Accomplishments

Six EJP2 grantees from 1995 to 1997 conducted projects designed to foster partnerships between communities and large industrial facilities. While these projects did not directly prevent pollution within the grant period, many of these projects convinced businesses to implement pollution control measures, improved community access to monitoring data, and fostered significant collaborations between communities and industries that might make pollution prevention more likely in the future. One grantee, for example, facilitated dialogues between a community task force and 12 local industries and as a result obtained $550,000 in funding from the state and federal government to develop an air toxics monitoring program, set up a local air pollution control district, and establish a community air pollution information center. Overall, the six EJP2 grantees:

Carried out 17 Good Neighbor Dialogues.

Helped get community concerns into a Supplemental Environmental Project undertaken by a local company.

Convinced four businesses to implement pollution control measures.

Developed two databases to help communities access pollution prevention information and monitor permits of local businesses.

Established three neighborhood action groups that continue to meet weekly to plan pollution prevention strategies for local industry.

B. Snapshots

Midwest Cities: *Good Neighbor Dialogues Give Voice to Community Concerns* (5-96-1)

Citizens for a Better Environment (CBE) provided technical and financial support to local grassroots organizations to help facilitate constructive partnerships among communities and local industries. In Chicago and Minneapolis, CBE helped communities establish Good Neighbor Dialogues that provided residents with the opportunity to meet directly with plant managers to discuss environmental concerns and pollution prevention opportunities.

Participating businesses have not yet implemented pollution prevention measures as a result of the dialogues, but according to CBE, they have greatly increased their awareness and understanding of pollution prevention's economic benefits. As a result, these businesses have begun to take initial steps to improve the environment. Participating businesses have purchased equipment to control air emissions (e.g., a steel manufacturer installed a more efficient pollution control device on one of its blast furnaces). They have also prepared for environmental emergencies (e.g., a chemical manufacturer installed leak detection sensors in its chemical storage room) and begun to solicit community input regarding pollution issues. Participating community groups have continued to emphasize the economic benefits of pollution prevention in their dialogues with local industries.

CBE also helped community groups in Chicago by ensuring their concerns were included in a Supplemental Environmental Project (SEP) undertaken by a local company in response to its violation of an environmental law. As part of its settlement agreement, the company agreed to clean up an abandoned industrial site and restore a local wetland. Partly due to CBE's efforts, EPA revised its SEP guidelines to reflect the potential for citizen involvement in developing SEP ideas. In addition, the Illinois Office of the Attorney General began a collaborative effort with CBE to encourage more outreach to community groups during the process of settling violations to state environmental law.

CBE also worked with a community group in a low-income Minneapolis neighborhood to monitor local businesses through their permits. CBE collected and entered information on the hazardous waste, industrial discharge, and storm-water permits obtained by local businesses into a database developed by CBE for use by the community. The database helps the community monitor the status of these permits and identify facilities with the best potential for pollution prevention.

Jefferson County (West End), Kentucky: *Forging Constructive Partnerships Between Industry and the Community* (4-96-1)

In the West End neighborhood, a low-income community in Jefferson County, Kentucky, the University of Louisville provided technical assistance to the West County Task Force to open a dialogue with 12 local industries in a synthetic rubber complex and collaboratively develop an air toxics monitoring program for their community. As a result of its technical assistance, the University of Louisville helped the West End community obtain an additional $550,000 in grants from the state and federal government to set up a local air pollution control district, establish a community air pollution information center, and develop an air toxics monitoring program to track more than 70 chemicals using EPA methods. To implement the air toxics monitoring program, the University of Louisville facilitated meetings between local industry and the community to select 13 monitoring sites throughout the neighborhood. The meetings also led to the identification of four additional air pollutants released by the industries but not covered by the EPA monitoring methods.

C. Insights and Strategies for Project Success

Before initiating collaborative projects, be sure that residents are aware of the link between local industries and pollution problems. Grantees found that residents are not interested in participating in collaborative projects if they do not see the benefit of reducing industrial pollution. Be sure to link the reduction of industry pollution to problems that residents are familiar with.

Communities and industries need to respect each other's needs and be willing to seek "win-win" solutions. Collaborative projects are most effective when both sides are willing to be honest and open about their concerns and are willing to listen to each other. Residents should approach industries in a non-adversarial way and enlist technical support from government or nonprofit organizations to develop pollution prevention solutions that benefit both the community and the industry. If some residents are employed by the industry, the community should mention they appreciate the value of the industry to the community. Public recognition of industries in exchange for pollution prevention measures can be a useful tool in encouraging businesses to participate in collaborative projects.

Include an engineer in Good Neighbor Dialogues. Engineers facilitate Good Neighbor Dialogues among community organizations and local industries by communicating effectively with company plant managers about incorporating pollution prevention measures into everyday plant operations as well as explaining technology issues to communities.

Consider SEPs as a tool for addressing community concerns. Residents should take advantage of federal or state SEP guidelines that allow them to incorporate their community concerns into mandatory environmental projects undertaken by local industrial facilities.

Compromise instead of working alone to develop solutions. The University of Louisville helped the West County Task Force work with local industry to select 13 air monitoring sites. The local industries recommended a certain number of sites, while the task force and the University of Louisville each came up with its own list of priority sites. Working together, the three parties were able to agree on 13 final sites. The University of Louisville believes the compromise solution worked best because it helped all participants to better understand each other's concerns.

SECTION V—EDUCATING COMMUNITIES ABOUT POLLUTION PREVENTION

Through EJP2 outreach and technical assistance projects, community members learned valuable skills needed to make informed environmental decisions and press for environmental change in their communities. Community workshops, television broadcasts, brochures, and newsletters are some of the methods EJP2 grantees used to teach residents about the importance of implementing pollution prevention measures in their homes and communities. To ensure the effectiveness of outreach campaigns in communities where language and cultural differences exist, such as immigrant communities, EJP2 grantees developed bilingual and culturally appropriate educational materials and programs.

A. Accomplishments

From 1995 to 1997, EJP2 funded 45 grantees to carry out projects that focused on educating communities about pollution prevention. Community outreach programs had a great impact in terms of providing pollution prevention and environmental education to low-income and minority communities. Grantees conducting community outreach and education projects:

Sponsored 277 workshops, conferences, and seminars.

Provided information to more than 40,400 people in communities across the nation.

Trained 343 volunteers in pollution prevention and environmental awareness.

Provided 770 onsite pollution prevention assessments to homes and businesses.

Additionally, grantees developed 58 outreach products including brochures, newsletters, videos, databases, and pollution prevention manuals, which will continue to provide useful information for community members in the future.

B. Snapshots

Kansas City (Westside), Missouri: *Environmentally Sound Neighborhoods* (7-95-4 and 7-96-1)

The Metropolitan Energy Center (MEC), located in Kansas City, Missouri, received two EJP2 grants to create a sustainable urban development model. MEC invented a process to serve as a model for sustainable urban development that can be used and replicated in other neighborhoods across the country. The key to success for MEC was its flexible approach to the grant project. Because the project involved the cooperation of numerous partners and focused on gaining the support of neighborhood residents, goals for the project were left open and developed as the grant project progressed. The grantee united neighborhood leaders and established open lines of communication with them in order to determine the specific needs and desires of community residents. From the suggestions offered at community visioning sessions, MEC identified common issues and created a replicable process for sustainable urban development.

MEC published the results of its grant projects in an instruction guide that outlines the steps associated with the design of the model for sustainable urban development. In addition to the creation of the model, MEC addressed the needs of neighborhood residents by providing weatherization services to more than 60 homes and sponsoring neighborhood cleanup campaigns. MEC also worked with the local public transportation authority to develop bus routes that met the needs of neighborhood residents.

New York City (Harlem), New York: *Pollution Prevention Education for Harlem Residents* (2-97-2)

The Harlem Environmental Impact Project (HEIP) provided pollution prevention education to low-income residents of Harlem. The grantee believed that a targeted outreach campaign would enable residents to make informed decisions about the environmental quality of their neighborhood and address local environmental justice issues. HEIP held six workshops that provided approximately 100 attendees with information on local environmental justice issues such as air pollution, sewage treatment plants, brownfields, and childhood lead poisoning. Additionally, the grantee produced broadcast-quality videos of the workshops, which were aired on public access television, reaching an estimated 20,000 people. HEIP published and distributed newsletters and brochures to local churches, hospitals, schools, and community groups throughout the neighborhood.

In addition, HEIP established the Harlem P2 Council (HPPC) that included leaders from local community organizations, city government officials, community centers, and schools. Members of HPPC developed strategies for providing pollution prevention outreach to the community and made recommendations to government officials at the local and state level concerning environmental justice issues in Harlem. The grantee also developed a Web site that included a calender of events, information on pollution prevention and environmental issues, and links to or data on Harlem-based and other environmental pollution prevention Internet sites. As a result of HEIP's efforts, the City Council of New York City authorized a $3,000 allocation to the HPPC to continue community outreach efforts.

Wyandotte County, Kansas: *Pollution Prevention Outreach for Both Old and Young* (7-97-1)

The northeast section of Wyandotte County, Kansas, is an economically depressed area that is home to 15 Superfund sites and two hazardous waste sites. Lack of a coordinated outreach program to provide information and education to the residents of this sector on environmental justice and pollution prevention prompted Community Health and Education Services to take action. The grantee assisted in the formation of the Northeast Pollution Prevention Task Force, a group of community educators that compiled informational materials and distributed them to residents. The community educators gave pollution prevention presentations to schools, churches, civic organizations, and businesses. In addition to these outreach measures, the grantee educated a group of young individuals on lead and carbon monoxide poisoning and household hazardous wastes. These individuals then presented this information to local Scout troops and

community and senior centers as a summer job. The grantee hoped that involvement of youth would lead to increased interest in pollution prevention initiatives among the adults of the community.

Through these outreach strategies, Community Health and Education Services provided pollution prevention and environmental quality information to more than 13,000 residents of Wyandotte County. The grantee gave presentations at six local schools and involved the students in activities such as essay and coloring contests. Additionally, the grantee distributed 125 carbon monoxide detectors to families.

Lowell, Massachusetts: *Hazardous Waste Disposal Education for Cambodians* (1-95-5)

The Waste Watch Center (WWC), located in Lowell, Massachusetts, partnered with the Cambodian Mutual Assistance Association (CMAA) to provide information on appropriate disposal of used motor oil and other household hazardous wastes to Cambodian residents. Together, the WWC and CMAA sponsored activities that promoted the proper disposal of used motor oil. A "Change Your Oil Day" offering free oil changes to interested parties attracted more than 200 individuals. Additionally, WWC and CMAA developed a bilingual automotive wastes brochure and distributed it to Cambodians via community retailers and social service agencies. In order to deter individuals from dumping hazardous wastes into city storm drains and raise awareness about water quality issues, the grantee placed 425 storm-drain markers throughout Cambodian neighborhoods. The CMAA held a Southeast Asian Water Festival at which the WWC handed out water quality and household hazardous waste information to attendees. An informal survey of 32 festival attendees determined that 26 individuals recognized the storm-drain markers and understood their purpose.

The grantee noted that aside from attaining the project objectives, outreach efforts stimulated considerable activity within the Cambodian community of Lowell. Residents of the Cambodian community improved or established relationships with a number of public utilities departments. In addition, the community enhanced its visibility and prominence in Lowell by demonstrating its commitment to a cleaner environment.

Chicago, Illinois; Gary, Indiana; and Hammond, Indiana: *Reaching Out to Communities* (5-95-3)

The Grand Cal Task Force sought to conduct pollution prevention outreach and education activities in various localities throughout Indiana. Grand Cal hired a full-time outreach coordinator to coordinate and implement outreach programs for low-income and minority communities. The outreach coordinator delivered a number of pollution prevention presentations to local schools, colleges, hospitals, maternity clinics, and housing projects. The grantee, however, received little response and support for the project. Members of the targeted sector expressed greater concern over securing employment rather than improving the environmental quality of their neighborhoods. The general lack of interest among the targeted sector for

pollution prevention hindered the success of the project. Young expectant mothers did express interest in and concern over pollution prevention initiatives that would have a positive impact upon the health of their children. This example reinforces the importance of tailoring the EJP2 message to make it relevant for the target audience.

The outreach coordinator delivered 24 pollution prevention presentations to various community groups, reaching an approximate 320 people. In addition to the distribution of general information, the grantee assisted in conducting 10 onsite visits to facilities. Though the grantee did not know the extent of the impact its program had upon the targeted sector, the grantee believed that its outreach campaign led to a heightened awareness of the importance of pollution prevention.

C. Insights and Strategies for Project Success

Grantees conducting successful outreach campaigns used the strategies highlighted in Section II of this report to achieve results. For instance, many grantees attributed project success to the commitment of those involved. Forming partnerships with those who possess expertise in specific areas such as community history, pollution prevention methods, or outreach and communication added strength to the grant project and increased the likelihood of a successful grant project. Additionally, a number of grantees, especially ones that partnered with other agencies, noted the importance of maintaining patience and flexibility when working on projects. Accommodating schedules, needs, and visions of not only partners, but also the target sector, can be arduous and time consuming. Projects that included the involvement of a variety of partners for multiple tasks often faced time and budget constraints. In other examples, overly ambitious projects rarely resulted in success. Grantees noted that if the project scope was too broad and ambitious, they could not successfully complete it within the allotted time.

SECTION VI—PROMOTING EFFICIENT RESOURCE USE WITHIN COMMUNITIES

EJP2 grantees focused on making communities more resource efficient through pollution prevention by demonstrating energy efficiency in housing, promoting alternative transportation, and creating urban gardens. Demonstration projects coupled with education enabled grantees to supply essential pollution prevention and environmental quality information to residents while providing them with beneficial services.

Grantees worked with communities to improve housing in low-income neighborhoods and provide energy saving options in improved structures. In addition to weatherization and other services, grantees provided educational materials on energy reduction, household hazardous waste, and other pollution prevention measures to members of targeted communities. Partnering with public transportation agencies enabled a number of grantees to improve the quality of service to low-income, minority neighborhoods. A number of communities wanting to improve resource efficiency used EJP2 funds to establish urban gardening centers in low-income neighborhoods. These centers united residents and involved them in community improvement projects.

A. Accomplishments

From 1995 to 1997, EJP2 funded 12 grantees to carry out pollution prevention projects that focused on improving efficient resource use within communities. Accomplishments of these grantees include the following.

<u>Housing, Energy, and Transportation Demonstration Projects</u>

Housing and energy projects focused on improving energy efficiency of housing and educating residents. Six grantees focused their efforts on providing low-income residents with home energy reduction services and information. As a result of their efforts, grantees:

Conducted onsite energy assessments or provided energy reduction services to 299 homes, schools, and businesses.

Sponsored 25 educational workshops and conferences.

Supplied information to 683 people.

The efforts of one grantee to improve air quality in low-income neighborhoods served by public transportation convinced city officials to purchase four alternative-fuel prototype buses.

<u>Urban Gardens</u>

Urban garden projects prevented pollution by giving community residents the opportunity to learn and practice organic farming techniques that eliminate the use of pesticides and other chemicals that can pollute groundwater or contaminate food. Urban garden projects also helped

low-income and minority neighborhood residents gain easier access to organic foods, which, according to grantees, are not as readily available in their neighborhoods as in other communities. Three grantees initiated urban garden projects in low-income and minority neighborhoods. In total, these grantees:

Established 26 urban gardening centers.

Sponsored 130 education and training workshops.

Received participation from 2,800 residents.

Trained 375 volunteers to oversee the maintenance of the gardens.

B. Snapshots

Housing and Energy Demonstration Projects

Atlanta, Georgia: *Energizing Atlanta Neighborhoods About Pollution Prevention* (4-95-7)

The EJP2 grant project under the Southface Energy Institute focused on helping affordable housing providers in the Atlanta Empowerment Zone to cut energy waste. Partnering with a number of affordable housing organizations and networks, Southface: helped Habitat for Humanity design 20 houses that exhibited energy efficiency; provided technical assistance on energy efficiency to the Historic District Development Corporation, located in the Martin Luther King, Jr., Historic District; worked in cooperation with the Community Housing Resource Center in an effort to provide energy-efficient tools and materials at wholesale cost to contractors; developed a training program on resource efficiency and environmentally sound, affordable housing; and provided onsite energy-efficiency inspections for a number of homes.

Through the grant project, Southface trained more then 300 housing and policy professionals, provided more than 1,000 hours of direct technical assistance, worked with more than 12 affordable housing groups, and improved more than 330 homes. As a result of the project, Southface estimates reductions of 1,237 tons of carbon dioxide, 25,099 pounds of sulfur dioxide, and 9,095 pounds of nitrogen oxides.

Denver, Colorado: *Sustainable Low-Income Housing Designs* (8-96-1)

The Northeast Denver Housing Center's (NDHC) Fillmore Street Project demonstrated economically viable sustainable principles for low-income housing. The grantee constructed a pilot single family house to determine the actual costs and performance of the "green" building materials and products before engaging in the larger task of constructing a five-unit affordable townhouse. In addition to constructing a sustainable housing prototype, NDHC trained numerous low-income and minority men and women on sustainable construction and deconstruction.

NDHC selected materials for the prototype based on criteria including pollution prevention, affordability, waste generation during manufacture, energy use, water use, and recyclability. Aside from sustainable construction, the grantee trained 10 to 15 low-income individuals on issues such as lead-based paint and asbestos hazards, construction and demolition waste management, environmental issues in housing, and green building products.

Despite construction delays, NDHC was able to complete a single-family home prototype and succeeded in introducing the concept of integrating sustainable design principles into low-income housing. Using experience gained from this project, NDHC now acts as a consultant to other nonprofit organizations involved in sustainable and affordable housing designs.

Transportation Demonstration Projects

Boston, Massachusetts: *Improving Transportation, Decreasing Pollution* (1-97-3)

Neighborhoods Against Urban Pollution (NAUP) is a collaborative effort of six Boston-based neighborhood organizations and environmental nonprofits. NAUP developed a grant project that addressed citizens' concerns about environmental health hazards resulting from emissions from diesel fuel buses. The grantee encouraged the Massachusetts Bay Transportation Authority (MBTA) to reduce diesel emissions from MBTA buses and to improve transit service overall to underserved neighborhoods. Additionally, NAUP raised community awareness on the hazards of diesel exhaust and the potential for preventing pollution by replacing diesel buses with cleaner, alternative-fuel buses. As a result of NAUP's work, MBTA committed to not buying additional conventional diesel buses and brought four alternative-fuel prototype buses into service.

Boston, Massachusetts: *Building a Better Urban Environment With Transportation* (1-96-1)

The Conservation Law Foundation (CLF), located in Boston, Massachusetts, provided education to minority communities on the impacts of motor vehicles and the benefits of environmentally preferable alternatives. The grantee developed materials to help communities tackle transportation issues on their own, reducing the need for outside assistance. A citizen's guidebook, *City Routes, City Rights: Building Livable Neighborhoods and Environmental Justice by Fixing Transportation*, includes information such as traffic calming measures, finding alternatives to diesel-powered transit, and working with government officials to implement change. The guide also presents success stories of traffic control efforts that have stabilized and enhanced inner-city neighborhoods. In addition to the guide, CLF developed training and workshop materials for community groups to help them carry out educational programs and address and discuss urban transportation problems at group meetings. The grantee also developed educational materials on urban transportation problems and incorporated them into youth training programs.

CLF distributed its citizen's guidebook to more than 500 individuals and attended 10 community group meetings, providing technical assistance on strategies to solve urban transportation problems. The grantee's efforts have been recognized by community development corporations throughout New England, as well as the Service Transportation Policy Project.

Urban Garden Projects

Los Angeles, California: *Greening Communities Through Gardening* (9-97-5)

The Los Angeles Conservation Corps' (LACC) Greening Exchange Project helped low-income areas of Los Angeles develop community gardens that were used as tools to educate residents about how to develop productive gardens without the use of chemical fertilizers, pesticides, and herbicides. LACC worked with government agencies and private companies to establish the gardens. Through the EJP2 project, LACC created the Los Angeles Community Garden Council, which advocates for community gardens throughout Los Angeles. In addition, LACC gathered and distributed donated gardening materials, supplies, tools, and equipment; and trained community gardeners in organic gardening.

The Greening Exchange Project was extremely successful and popular among the residents of the targeted communities. The project resulted in the creation of 18 community gardens in underserved areas of Los Angeles that are now growing fruits, vegetables, and herbs organically. It secured approximately $88,000 in donated materials, supplies, tools, and equipment for use in the community gardens and provided training for approximately 300 community gardeners in organic-intensive gardening.

C. Insights and Strategies for Project Success

Community improvement projects receive widespread support. Residents especially enjoyed cost savings associated with weatherization projects and convenience associated with public transportation improvements. Grantees noted the importance of explaining the connection between environmental improvements and personal cost savings and other benefits to residents.

Evaluation of success is difficult. Grantees involved in resource efficiency projects often faced barriers in evaluating the success of their programs. For instance, it is difficult to gauge the success of urban garden projects because they focus on community involvement and improvement. Lacking quantifiable factors that indicate success or failure makes it hard for grantees to measure and express the achievements of the project. Denver Urban Gardens, for example, developed demonstration gardens that would: address the need for healthy pesticide-free produce for low-income families; clean up polluted, vacant lots to be sustainable, productive land; and provide hands-on education to the residents. While the project benefitted its participants and achieved success by

affecting change at the grassroots level, quantifying achievements associated with the project was not possible.

EJP2 youth education programs taught students about a variety of environmental issues, including industrial pollution and household hazardous waste. They also trained students to become effective community advocates and linked them to local environmental professionals, who provided mentorship and potential internship opportunities. According to EJP2 grantees, students often brought home what they learned in youth education programs by encouraging their families to implement pollution prevention measures and informing them of community environmental concerns.

A. Accomplishments

The 11 youth education projects accomplished a variety of curricula and internship projects. Many grantees developed or taught EJP2 curricula to educate youth at a variety of schools and community colleges. Some curricula provided specific training such as pollution prevention in auto repair, while others taught students advocacy skills (e.g., letter writing to businesses) and covered a wider variety of pollution prevention issues. Other EJP2 grantees provided internships to youth to teach them pollution prevention concepts or help them become community advocates. EJP2 internship programs allowed grantees to provide intensive pollution prevention training to youth, enabling them to provide technical assistance to businesses and conduct pollution prevention outreach to residents.

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Curricula Projects

Youth education projects succeeded in providing valuable training to students and produced many immediate environmental impacts because of student activities. Overall, EJP2 grantees developed five new pollution prevention curricula and trained more than 1,300 students at 20 schools. Students trained to become community advocates:

Conserved more than 130,000 gallons of water.

Replaced more than 1,000 hazardous household products at home with safer alternatives.

Reported 10 leaking fire hydrants to local authorities and convinced three of their employers to correct poor waste management practices through pollution prevention.

Internship Projects

Students receiving training and participating in internships became valuable resources to their community, by:

Conducting waste audits at local businesses

Making presentations to residents

Distributing pollution prevention information

Writing letters to the editor

Holding community meetings

Conducting health surveys

Developing Web sites to provide environmental information to the community.

B. Snapshots

New York City (Greenpoint and Williamsburg), New York: *Teaching Students to Become Environmental Advocates* (2-95-3 and 2-97-1)

Through the Training Student Organizers (TSO) Program, the Council on the Environment (COE) helped students in the heavily polluted Greenpoint and Williamsburg communities of New York City to address environmental concerns in their neighborhood. COE developed and used its Greenpoint/Williamsburg Environmental Education project curriculum to essentially train students to become community advocates. COE involved students from eight area schools in weekly classes and environmental projects on a variety of issues, including water quality, community toxics, source reduction, energy conservation, air quality, and sustainable development. Over 2 years, COE trained 1,307 students, who completed more than 20 environmental improvement projects in their communities.

With assistance from COE, students learned how to: promote pollution prevention in their community (through presentations, demonstrations, and events at school); access government technical assistance programs; contact environmental experts; hold public meetings; write letters and press releases; conduct environmental surveys in their neighborhoods and homes; develop environmental outreach materials (including fact sheets, advertisements, and educational posters); and communicate with local businesses. Over 2 years, TSO students reached more than 3,300 local residents through pollution prevention outreach and training activities.

To track the results of TSO projects, COE provided students with simple worksheets to complete as homework to measure the amount of water conserved or record the number of

individuals listening to their presentations. Using these worksheets, COE determined how much water students conserved at home during a water conservation project, how many hazardous household products families replaced with safer alternatives, and how many leaking fire hydrants students reported to local authorities.

The TSO program helped youth in Greenpoint and Williamsburg to become valuable assets to their communities. Students wrote 157 letters to the editor on pollution prevention issues and had 10 of them published in local newspapers. TSO students were offered jobs and internships to support pollution prevention work, collaborated with existing local groups, provided pollution prevention information at community events, organized community meetings for outreach purposes, were called upon by local newspapers for environmental stories, and completed other community advocacy work.

Perhaps the most dramatic outcome of the TSO program occurred after students mapped more than 40 local industries in their neighborhoods that were required to report toxic chemical releases but were not doing so. In response, students wrote good-neighbor letters to the industries to inform them they were aware of their use of toxic chemicals and to encourage them to adopt pollution prevention measures to benefit the community. Students then organized a community meeting to raise awareness of the community toxics problem—they obtained a venue for the meeting, drafted a press release, wrote and mailed invitations to public officials and business associations, created posters and flyers to promote the event, and developed and implemented an agenda that included leading small group discussions. At the meeting, which was attended by 105 residents, adults did a mapping activity as students had done and brainstormed potential solutions to pollution problems. In addition, as a result of the meeting, a representative from New York City's Department of Environmental Protection pledged support to ensure identified businesses complied with the law.

Somerville, Massachusetts: *Preventing Pollution While Teaching Youth Valuable Job Skills* (1-97-2)

Through an internship program, the Community Action Agency of Somerville (CAAS) trained 12 Haitian and Latin American youth as peer leaders who conducted pollution prevention outreach to 10 auto repair shops in low-income communities in Somerville, Massachusetts. CAAS partnered with the City of Somerville Environmental Protection Office (EPO) to accomplish the project. CAAS coordinated the youth groups, while EPO provided pollution prevention training to the youth and acted as a technical advisor.

After coordinating a group of six Latin American and six Haitian youth to become peer leaders, CAAS taught them a number of skills, including writing business letters, planning and facilitating meetings with businesses, and communicating effectively with adults. EPO and guest trainers from EPA, Tufts University, and the Massachusetts government taught the youths the causes and effects of pollution, the basics of pollution prevention (e.g., process change and

product substitution), and information on implementing specific pollution prevention measures in auto repair shops.

Peer leaders developed a checklist for completing hour-long onsite visits and worked directly with auto-related businesses, performing detailed pollution prevention assessments. After each assessment, the peer leaders prepared a report that rated each business' environmental performance and provided pollution prevention recommendations specific to that business.

CAAS found an effective method for teaching pollution prevention to small auto shops in low-income and minority communities. The method created a level of cooperation not generally found by EPO when providing nonregulatory technical assistance through workshops, onsite assistance, or matching businesses with others that have successfully achieved pollution prevention.

The peer leaders quickly learned the pollution prevention and skills development material, which improved their confidence and raised their sights for jobs and future educational opportunities. The Somerville Board of Alderman awarded citations to the peer leaders for demonstrating leadership, intelligence, and hard work during the training and projects they completed under the internship program.

Trenton, New Jersey: *Teaching Students to Audit School, But Unable to Implement Energy-Efficiency Measures* (2-95-6)

Isles, Inc., developed a curriculum to teach 50 students in two fifth-grade classes in Trenton, New Jersey, about energy, its use, and how people can conserve it. Isles also taught students how to conduct an energy audit of their school. Isles hoped that the students' results would encourage their school to implement energy-efficiency measures. To complete the audit, students used classroom survey worksheets to count the number of light fixtures in the school and measure light levels, calculated the potential watts saved per hour using more energy-efficient bulbs, identified possible improvements to be implemented during the following school year, and calculated the annual cost savings as a result of recommended changes.

Although the students determined methods for improving energy efficiency at their school, the school itself had already retrofitted their lighting 3 years before and did not have the resources to carry out an additional retrofit so soon. Nevertheless, students prepared and presented a report to the Trenton Superintendent of Schools on their findings and encouraged the superintendent to implement similar youth education projects at other area schools.

Oxford Hills Region, Massachusetts: *Teaching Pollution Prevention to Auto Repair Vocational Students* (1-97-1)

In an effort to help keep pollutants out of the only source of drinking water for a rural, low-income Maine community, the Androscoggin Valley Council of Governments (AVCOG) developed a pollution prevention curriculum for students in high school auto repair programs. The curriculum covers fluids and waste management, pollution prevention in auto body work, and health and safety. AVCOG also developed a resource guide to accompany the curriculum including student handouts, contact information, and Internet resources applicable to each module of the curriculum. To promote the curriculum, AVCOG made five presentations at teacher consortiums held throughout the state and distributed 25 copies of the curriculum. To pilot test the curriculum, local vocational teachers used the modules and resource guide throughout the academic year to supplement their regular auto repair lessons and to emphasize the concept of teaching students through hands-on work.

Milwaukee (South Side), Wisconsin: *Students Become Advocates for Cleaner Air* (5-97-4)

The Sixteenth Street Community Health Center worked with the South Division High School in Milwaukee's South Side neighborhood to develop and implement a curriculum on air quality and asthma. As part of the curriculum, 154 biology and chemistry students developed a bilingual questionnaire to survey 800 of their classmates, worked with the Wisconsin Department of Natural Resources to monitor air quality (e.g., ozone and particulate matter) in their neighborhood, and researched the causes, triggers, and treatments of asthma. The survey revealed that 16 percent of the students at the school suffered from asthma—two times higher than the national average for people under 18. In addition, the students found that air quality in the South Side neighborhood was worse than in other areas of the city. To promote their project and report their findings, the students developed a Web site <ftp.milwaukee.k12.wi.us/schools/south/cyber/asthma.htm>, created a brochure, and designed an educational computer program.

C. Insights and Strategies for Project Success

Curricula Projects

Train students to become community advocates. EJP2 youth education curriculum programs were most effective in engaging students when they trained students to become community advocates. Some curricula included out-of-class activities such as neighborhood surveys or presentations that helped students learn the skills community advocates use to effect change.

Include a simple method to measure results and collect data. Without a method to measure results of EJP2 youth education programs, it is difficult to determine their effectiveness in preventing pollution. EJP2 grantees in general have found that youth are quite capable of collecting accurate data if methods are simple enough. In COE's TSO

Program, for example, students were given worksheets to determine how many gallons of water or watts of electricity they conserved at home or school as part of their assigned pollution prevention projects. COE students completed and handed in the worksheets as homework, which were then reviewed by COE staff for accuracy.

Keep projects focused. EJP2 youth education projects worked best when they were focused. By keeping projects focused on one or two pollution prevention topics, youth were more interested in participating and completing the projects, making results from the projects more likely. COE involved students in weekly classes and in environmental projects that covered at least two topics over the course of a semester. By focusing on one particular pollution prevention topic in detail for an extended time instead of a wide variety of topics (e.g., low-impact transportation versus all of the ways to prevent pollution in the home), COE was able to help students develop and carry out focused pollution prevention projects that achieved results.

Youth projects should also be structured and straightforward. Although students in the COE program helped create and transform their projects, COE staff ensured projects were structured enough to achieve results. To prepare for presentations to other students and community members, for example, COE first had students research and develop presentation boards, demonstrations, and outreach materials, all of which formed the basis for their presentations. COE also ensured projects were straightforward enough for students to carry out. For example, COE provided students with Toxics Release Inventory and other right-to-know data to use in mapping local industries in their neighborhoods, rather than asking the students to try and obtain this information on their own.

Encourage environmental professionals to meet with youth to open up opportunities for internships and mentors. Environmental professionals from local businesses, government, nonprofit organizations, and utilities show youth that their environmental training has real-world applications. EJP2 grantees connected youth with environmental professionals and found that many are willing to offer youth paid internships or act as mentors for them. This is especially important in minority and low-income communities, where youth generally have more limited access to job training and career opportunities.

Partner with a technical expert to produce curricula if the organization lacks expertise. Sometimes the technical expertise necessary for achieving pollution prevention results goes beyond the ability of the average community group. Many successful EJP2 grantees partnered with technical experts to access resources unavailable to them. AVCOG, for example, a regional planning and economic development agency in Maine, partnered with an active nonprofit organization with pollution prevention expertise, the Northeast Waste Management Officials Association, to produce its auto repair curriculum for vocational students, which AVCOG would not have been able to produce on its own.

Internship Programs

Train bilingual youth to provide technical assistance to small businesses. Since youth participating in the CAAS internship program were bilingual in either Haitian Creole or Spanish, they were able to provide assistance to non-English-speaking auto shop owners. According to CAAS and EPO, auto shop owners in immigrant communities appear more willing to make pollution prevention changes through the youth inspection method than through more traditional methods such as pollution prevention workshops, onsite technical assistance, and matching businesses with others that have already implemented pollution prevention measures. Auto shop owners enjoyed working with the youth and having the chance to provide them with an educational opportunity. An informal followup inspection conducted by EPO indicated auto shop owners who received youth inspections were experimenting with pollution prevention measures.

Understand limitations in keeping youth interested. To keep youth excited about pollution prevention work, CAAS decided to let the youth have more of a say in what work they would do and how they would do it. CAAS realized, however, that this practice sometimes required CAAS to provide additional training to the youth, limiting the time available for youth to complete projects and achieve pollution prevention results. For example, CAAS decided to let youth research and write a brochure on hazardous household products instead of just translating an existing brochure. Although the students gained important skills, the brochure was not completed within the time frame originally planned. EJP2 grantees should weigh the benefits of providing youth with the ability to choose versus the benefits of completing projects and achieving pollution prevention results.

Pay interns a good wage to retain them. Some EJP2 grantees found that youth participation in internship programs fluctuated due to family demands such as needing to find a higher paying job or having to move away. In response to this challenge, grantees suggest paying interns a stipend and to try and retain a core group of interns who can help train new students that join the program. This provides stability to the program, allowing more effective training of student interns.

SECTION VIII—DEMONSTRATING AGRICULTURAL POLLUTION PREVENTION

Pesticides, fertilizers, and soil erosion from farms can cause water pollution problems in low-income, rural communities. In addition, conventional agricultural practices can put the health of farm workers at risk. To encourage farmers and ranchers to prevent pollution, EJP2 grantees demonstrated innovative farming methods and provided tools and education on best management practices. In addition, to promote worker safety, a number of grantees secured funding to help immigrant farm workers initiate changes in farming practices. Although many projects helped raise the awareness of farmers, most grantees had difficulty convincing farmers to make the next step and integrate pollution prevention measures into their usual farming practices. According to EJP2 grantees interviewed, lack of community support and limited financial resources are two major hindrances to adoption of environmentally sound agriculture.

A. Accomplishments

From 1995 to 1997, five EJP2 grantees carried out pollution prevention projects that sought to reduce agricultural pollution. The most successful component of these grants was providing education to and raising awareness among farmers and their communities. During the course of the projects, the grantees:

Conducted 63 workshops and demonstration events that were attended by approximately 2,826 farmers. The workshops and demonstrations were on topics ranging from composting and integrated pest management (IPM) to raised bed farming and sustainable livestock raising.

Distributed outreach materials to nearly 800 people.

Trained 67 migrant workers on IPM.

Grantees also created two community-supported gardens and developed a reforestation project that involved 223 community members planting 450 trees.

B. Snapshots

Texas Panhandle, Texas: *Sustainable Agriculture and Integrated Pest Management* (6-96-1)

The National Center for Appropriate Technology (NCAT) coordinated an outreach effort for Latin American farm families and agricultural workers in the Texas Panhandle. The grant project was designed to increase access and use of technical information on IPM and other sustainable agriculture practices. To boost farmers' and workers' knowledge of IPM and sustainable agriculture, NCAT partnered with a local grassroots organization, the Promised Land Network (PLN) to solicit community support. PLN and NCAT conducted workshops and demonstration projects on sustainable farming systems and created community supported agriculture gardens that established a partnership between agricultural producers and consumers. NCAT also funded farmer learning exchange trips and offered mini-grants to support small-scale

agriculture projects in the community including a sustainable poultry production marketing project.

The most significant result of the project was the awareness the community acquired of the linkages between agriculture, environment, and human health. This is illustrated both by the number of participants in each project activity and in the sheer number of demonstration projects, meetings, and workshops that were conducted. By offering 32 hands-on demonstrations and providing face-to-face interactions, NCAT opened the lines of communication with farmers and agricultural workers and attracted a high level of interest. Responding to the needs of these rural families and combining education with social and cultural events enabled NCAT to reach more than 1,700 people and propelled the grant project toward success. The project also opened new doors to local, regional, and national resources for ongoing access by these Latin American families.

Fordyce, Hartington, Bow Valley, Custer County, and Adams County, Nebraska: *Making an IMPACT on Nebraska's Farmers* (7-95-6)

Using EJP2 funding, the Nebraska Sustainable Agriculture Society (NSAS) developed the Nebraska IMPACT project, which provided eight grants to local agricultural groups in low-income rural areas to teach farmers how to integrate pollution prevention into agricultural production methods. IMPACT groups: designed and monitored on-farm investigations of environmentally sound farming practices; provided workshops, site tours, and field demonstrations to more than 200 interested farmers; and gave presentations at cooperative extension events and meetings, reaching an additional 175 attendees. One group, for example, raised chickens in movable, bottomless pens on the pasture to reduce the need for chemical fertilizers and eliminate waste disposal problems. In another example, a different group put more land into chemical-free production by using goats to control weeds rather than pesticides.

Support for the pollution prevention practices increased over time as the farmers realized profits had increased. Although these practices slightly reduce input costs, the major benefit is the value added to the farmer's product and the resulting increased profits. As a result of the field days, workshops, and education events, the groups also experienced an increase in membership and interest in pollution prevention agricultural farming methods and found that cooperative extension service staff became more aware of the needs of farmers interested in implementing pollution prevention measures.

Northwest Ohio: *Reducing Pesticides, Improving Worker Health* (5-95-8)

Protecting People through Pesticide Pollution Prevention, a program undertaken by the WSOS (Wood, Sandusky, Ottawa, and Seneca counties) Community Action Commission in northwest Ohio, focused on protecting the health of migrant and seasonal farm workers and their families by providing financial incentives to growers to adopt IPM methods. The most significant accomplishment of the grant involved the education of growers and migrant farm workers on

IPM. Under the EJP2 grant, the WSOS Commission developed a cost-share program that provided funding for 11 growers to invest in pesticide pollution prevention techniques and designed, in partnership with the Farm Labor Research project, a bilingual training curriculum for migrant workers on the basics of IPM, which was attended by 67 individuals.

The cost-share program raised more than $40,000, which was then redistributed to growers to purchase equipment and implement pesticide pollution prevention techniques. As a result, farmers managed 444 acres of land using IPM techniques, saving approximately 37,810 gallons of chemical pesticides.

Imperial Valley Communities, California: *Leading a Community Toward Understanding* (9-95-4)

The Resource Policy Institute sought to facilitate discussions over a hotly debated water transfer proposal in the Imperial Valley, a major agricultural area in southern California. Though the debate has not been settled, the grantee made significant strides in forging consensus by bringing interested parties to the discussion table.

The debate centered around a proposal to transfer some of the valley's water resources to the city of San Diego. Some residents believed that less water would mean costlier water, and without abundant supplies of affordable water for crop irrigation, the local economy would suffer. Advocates for the water transfer argued that the water supply would not be endangered if conservation techniques were adopted by the valley's residents. The Resource Policy Institute established the Imperial Valley Environmental Leadership Council (ELC), a group of Imperial Valley residents, local government officials, and representatives from a business development council and county housing authority to resolve this issue. The ELC held conferences at which local farmers, residents, and politicians could voice their opinions over the water transfer issue. The conferences also served as a forum for exchange of information on water conservation measures. Through a series of workshops at schools, universities, and community-based organizations, the Resource Policy Institute provided background information on the concepts of environmental justice and the use of pollution prevention. The grantee developed 10 bilingual EJP2 handouts and one bilingual video, *Pollution Prevention: The Key to Environmental Justice*, which were distributed to more than 500 people.

Though the residents of the Imperial Valley are still divided over the water transfer issue, the Resource Policy Institute assisted in opening the lines of communication between the two sides and was able to provide residents with the information they needed to make informed decisions regarding the environmental quality of their land.

C. Insights and Strategies for Project Success

The effective strategies used by grantees carrying out agricultural EJP2 projects were based on the factors contributing to program success highlighted in Section II. For example, grantees involved in successful agricultural projects also found that personal interaction was essential to opening the lines of communication and establishing trust with farmers and workers. Gaining the support and assistance of a recognized member of the community also proved to be highly effective in building relationships with the targeted audience. Personal interaction enabled grantees to better understand the needs of the agricultural community, allowing grantees to modify grant projects to better meet the demands of farmers and workers. Once grantees established trust with the community, many grantees found that an effective strategy for distributing information among farmers and workers was combining educational workshops with demonstration activities. On the other hand, a number of grant projects found workshops that used a classroom-like instructional format alone did not achieve as much success. Although workshops and demonstrations provided valuable information on a variety of topics, this information alone did not initiate pollution prevention practices among farmers. Farmers required clear evidence that pollution prevention activities would save them money and yield high-quality crops.

SECTION IX—IMPROVING TRIBAL ENVIRONMENTS

Tribes face unique challenges when addressing environmental problems in their communities. Some of these problems include air and water pollution caused by off-reservation activities, a lack of tribal environmental infrastructure such as legislation and enforcement measures, limited tribal financial resources, and difficulty gaining access to state and federal technical assistance programs due to typically remote tribal locations. EJP2 provided funding for outreach to tribal communities and providing technical assistance to tribal businesses. EJP2 also helped tribes develop overall strategies to address environmental concerns and promoted the development of tribal environmental legislation and other environmental infrastructure essential for pollution prevention.

A. Accomplishments

From 1995 to 1997, 25 EJP2 grantees carried out pollution prevention projects that focused on improving tribal environments. Through these projects, grantees:

Hosted 43 educational workshops, seminars, and community events, reaching more than 2,350 people.

Trained 41 volunteers in pollution prevention techniques to assist in educating tribal residents.

Distributed brochures, fact sheets, and other outreach materials to 1,950 people.

Provided energy reduction measures, sustainable agriculture practices, and alternative energy services to 392 tribal members.

Constructed a “green” building on tribal lands.

Adopted two systems to capture alternative energy sources to meet communities’ needs.

Conducted eight waste audits at tribal facilities.

Established a pollution prevention resources library containing technical, general environmental, and tribal history and philosophy information.

B. Snapshots

Rosebud Sioux and Blackfeet Indian Tribes: *Integrating Cultural Design and Resource Efficiency* (8-95-10)

To combat the housing crisis facing the Rosebud Sioux and the Blackfeet Indian Tribe (located in South Dakota and northwest Montana), the Waste Reduction Institute for Training and Applications Research (WRITAR) secured EJP2 grant funds to create housing designs that

would be both resource- and energy-efficient and reflective of Native American cultural values and traditions. Energy-efficient housing prevents pollution by reducing the demand for fossil-fuel energy and the air pollution associated with it. Community-based housing design workshops allowed WRITAR to ascertain the needs of the communities as well as involve tribal members in the design and construction of the housing. Additionally, WRITAR collaborated with the Center for Resourceful Building Technology of the University of Oklahoma College of Architecture, and the American Indian Council of Architects and Engineers to develop an affordable, sustainable housing model—the Rosebud Design. This model, a single-family home that can be modified to meet owner specifications, cost less than $11,000 for materials. The U.S. Department of Housing and Urban Development recognized the project through its Building Innovation for Home Ownership Award Program.

Through open communication with tribal members on their housing needs and economic means, WRITAR developed a culturally and environmentally responsive building design that is affordable to those residing in low-income areas.

Lower Sioux Tribe: *Energizing the Community About Alternative Power Sources* (5-95-4 and 5-97-2)

The Lower Sioux community, located in Minnesota, sought to find environmentally-friendly sources of energy to support tribal economic development and maintain community stability. EJP2 grant funds enabled the Tribe to conduct a wind feasibility study, provide education and outreach materials for community members, and establish a wind energy demonstration project. The grantee faced challenges such as fluxes in wind energy and problems with the contractor. The obstacles, however, did not cause the Lower Sioux to waver in their pursuit of an alternative energy source.

Through determination and perseverance, the Lower Sioux successfully constructed a fully operational demonstration unit, created educational materials for the public, and distributed energy-savings information to 450 members of the community.

Northern Cheyenne, Fort Peck, and Crow Indian Tribes: *Leading Tribes Toward Environmental Awareness* (8-95-3)

Responding to the fact that many Native American tribes lack a well-developed understanding of basic pollution prevention concepts, Montana State University (MSU) Extension Service strived to educate residents of three tribal communities, the Northern Cheyenne, Fort Peck, and Crow Indian Tribes, all located in Montana. The grantee formed leadership teams at each of the participating reservations to guide the development and implementation of the project. The leadership teams identified the leading environmental concerns of each tribe, developed appropriate pollution prevention information and education efforts, and served as the reservation pollution prevention and implementation board. The leadership teams communicated effectively with their tribes; however, their dependance upon the grantee for guidance and funding hampered the long-term goals and success of the project. The three leadership teams conducted five pollution prevention workshops, reaching 98 people. Only

one of the tribes committed funding to continue the established pollution prevention initiatives after the completion of the grant period. MSU believed the leadership teams would have achieved greater success if they had established their own goals. Even so, the grantee felt the leadership teams made a positive impact upon their tribes.

Chickaloon Native Village: *Renewable Energy for Native Americans* (10-97-1)

Residents of the Chickaloon Native Village, located in south-central Alaska, rely heavily upon the local environment to supplement their diets and support their livelihoods. Fossil fuel pollution has posed many problems for the Chickaloon Natives; to combat the ill effects of these harmful contaminants, the village used EJP2 funds to invest in a comprehensive renewable energy resource development framework. After researching alternative electricity sources, the grantee determined that wind and water power were the most applicable and cost-effective renewable technologies considering climate and terrain. The grantee performed a physical inventory of the surrounding lands and established a small hydro-electric plant and wind station in close proximity to the village. Operators, hired by the grantee, monitored the equipment to determine the project's success. After some months of monitoring, the grantee discovered the original wind station site did not provide enough energy so the wind station was moved to a new location. The repositioning of the wind station caused a delay in the project, resulting in insufficient funding for continued monitoring of the wind station. The villagers, however, were determined to see their project succeed and performed work on the second wind station on a voluntary basis.

Shoshone & Northern Arapaho Tribes: *Educating Tribal Members and Reducing Exposure* (8-95-6)

The Wind River Indian Reservation, home to the Shoshone and Northern Arapaho tribes, lies in west-central Wyoming and comprises 2.3 million acres of land. Using EJP2 funds, the grantee sought to reduce the exposure of tribal members to potentially toxic chemicals though a combination of efforts aimed at education, access to information, pollution prevention planning, and elimination of hazardous chemicals from households. To distribute information to tribal members and engage them in discussions focused on environmental issues, the grantee held four public meetings and two environmental fairs that provided information for adults as well as children. Through these outreach efforts, the Shoshone and Northern Arapaho tribes provided essential environmental health information to approximately 1,000 tribal members. The environmental fairs enabled the grantee to ascertain the concerns and issues that were important to the community and use the information to shape the discussions of the public meetings. Additionally, the grantee developed three informational brochures, created a hazardous material inventory database, and established a library containing information on chemical and hazardous materials. The grantee noted that the grant project allowed it to provide useful and needed information to tribal members and that the results exceeded expectations.

C. Insights and Strategies for Project Success

The effective strategies used by grantees carrying out tribal EJP2 projects were similar to the factors contributing to program success highlighted in Section II. Many grantees attributed overall project success to public outreach campaigns. For example, tribal grantees noted the importance of understanding the cultural beliefs and environmental needs of the targeted community in order to effectively communicate with them. In addition, successful grantees stressed the importance of educating both adults and children. Educating adults on pollution prevention issues helped them gain an understanding for the impetus behind the program and encouraged them to lend their support. By targeting youth, grantees fostered a growing appreciation for environmental issues. Other grantees hoped to reach the parents through the children. Additionally, tribal grantees noted that effective internal and intergovernmental communication was vital in effecting and provoking changes in tribal communities. Communication among groups helped tribal communities establish sound relationships with many technical assistance organizations, which facilitated the implementation of programs.

In order to address the needs and gain the support of the target sector, some grantees needed to modify the original project plans. Project modifications allowed grantees to provide communities with needed pollution prevention and environmental education as well as provide other desired services to residents, such as recycling collection programs and community cleanup activities. When grantees could not focus activities on pollution prevention, they could help communities move up the waste reduction hierarchy.

Grantees involved in tribal projects also learned the importance of persistence. Several grantees implemented alternative energy demonstration projects and achieved success due to their relentless pursuit of environmentally preferable energy sources. Complications due to natural factors such as fluxes in wind energy or a shortage of funding due to unanticipated problems did not stop grantees from pushing ahead and achieving their goals. Another important lesson learned through tribal grant projects was following through with communities to ensure that grant projects were sustainable. Many grantees hoped that the information and services provided to tribal members would have a lasting impact, however, few actually assessed the long term impact of their project.

SECTION X—CONCLUSION

Through this analysis, EPA determined that the EJP2 grant program has had mixed success in achieving its goals. The Agency believes the grant program successfully served its purpose—to operate as a fund for innovation enabling a wide range of community groups, tribes, and local governments to identify environmental problems and potential approaches for their communities, within the general outline of prevention solutions. While some individual grantees conducted successful projects that resulted in measured quantities of pollution prevented, most projects could not describe success beyond an anecdotal assessment.

To use limited resources most effectively, EPA plans to restructure the EJP2 grant program in FY 2000 to focus efforts on publicizing approaches that work and providing information to communities to help them conduct successful projects, rather than sponsoring new grant competitions. The EJP2 program was never intended to be a permanent funding source. EPA believes that its resources are best spent on transferring information on effective strategies to communities across the nation, rather than funding new groups to experiment with EJP2 solutions tried previously under the grant program.

APPENDIX A: METHODOLOGY\

This report focuses on EJP2 grants awarded from 1995 to 1997 and work conducted through 1999. The report does not look at results from grants awarded after 1997, since many of these grantees were still completing their projects at the time of the analysis. This report only examines environmental justice grants provided through the EJP2 program—it does not look at other federally funded environmental justice grant programs (e.g., EPA's Community/University Partnership Grants Program) and does not examine EPA Region-funded environmental justice grants.

To begin the analysis, EPA first developed study questions to guide the assessment process. In addition to seeking information on the environmental justice issues addressed by each grantee, EPA also sought to answer the following questions concerning project implementation:

Was the grantee able to accomplish the goals identified at the outset? Did the scope of the project change over the course of its implementation? Why?

What aspects of the project worked well? What factors contributed to its success?

What did the grantee consider the greatest accomplishment of the grant?

What aspects of the project did not go as well as planned? What major barriers or challenges did the grantee encounter? How did the grantee overcome them?

What important lessons did the grantee learn through implementation of the grant? Would the grantee approach the project differently based on these lessons learned? How?

What advice does the grantee have for other communities wanting to implement similar projects?

Has the grantee developed products that can be shared with other communities?

Was the grantee able to track activities conducted such as number of workshops or onsite visits?

Did the grantee identify any other indicators to measure the project's impact such as increased awareness of pollution prevention techniques, adoption of pollution prevention technologies, or environmental or human health improvements?

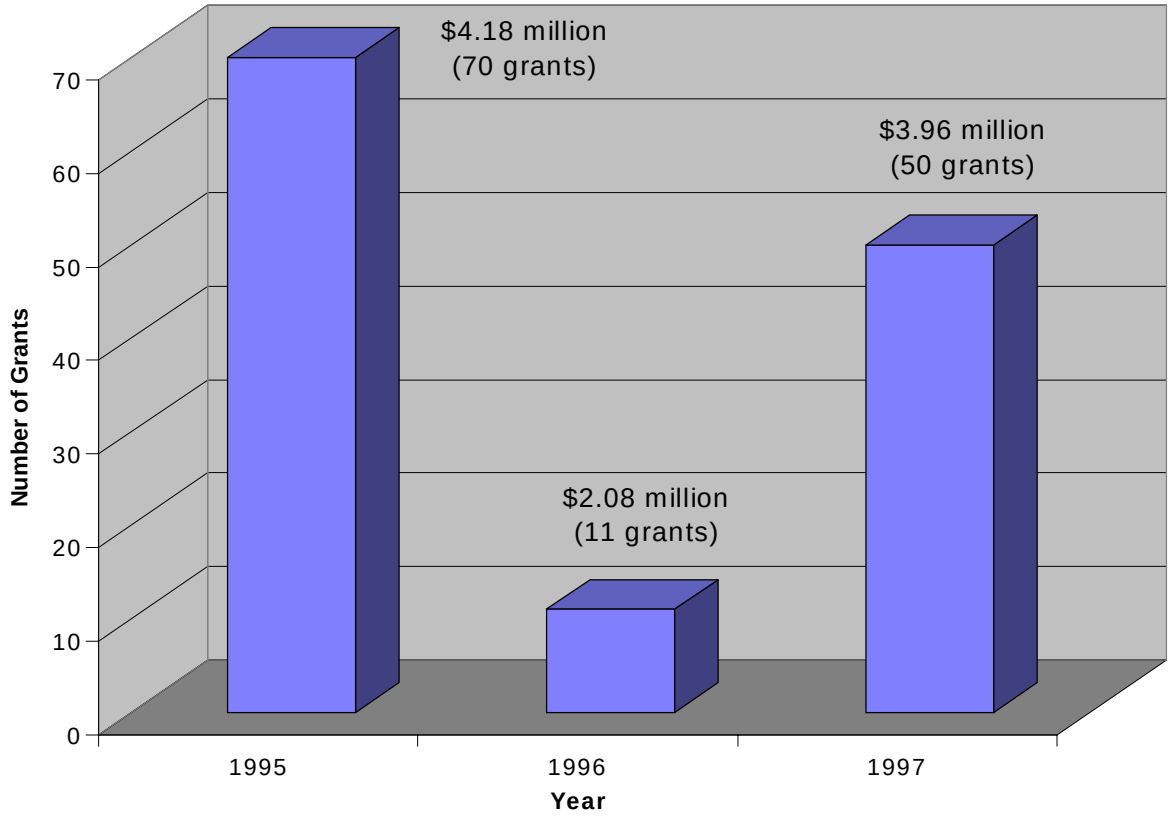
EPA conducted file reviews for all EJP2 grantees to answer as many of the study questions as possible. EPA looked at products created and progress and final reports submitted by the grantees (107 grantees submitted these reports). To collect more detailed information on project activities and results, EPA interviewed 88 of the 131 grantees (67 percent) that received funding between 1995 and 1997. EPA could not interview the remaining grantees due to

scheduling difficulties, disconnected phone numbers, or turnover in grantee personnel. EPA believes many of the grantees not interviewed had additional results not captured in this assessment. After completing the interviews and report reviews, EPA analyzed trends and determined effective strategies for project success across all grantees and by project type.

APPENDIX B: EJP2 FUNDING AND DISTRIBUTION OF GRANTS

From 1995 through 1997, EPA provided more than $10 million in EJP2 funds and a total of 131 grants (see Figure B-1). Throughout the first 3 years of the grant program, EPA funded an average of 45 grants per year across all 10 EPA Regions, including some projects that were national in scope. In all, EPA awarded 127 grants to organizations[8] within a single state and 4 multi-state or national grants from 1995 through 1997. Community groups and other organizations in 39 states, Washington, D.C., and Puerto Rico received grant awards. On average, EPA awarded two grants per state. Organizations in New York, California, and Massachusetts received the most grants—nine or more each. Figure B-2 shows the allocation of grants by state.

Figure B-1. Distribution of EJP2 Grant Funds, 1995 to 1997



[8] Some organizations received more than one grant.

Figure B-2. Distribution of EJP2 Grants by State, 1995 to 1997

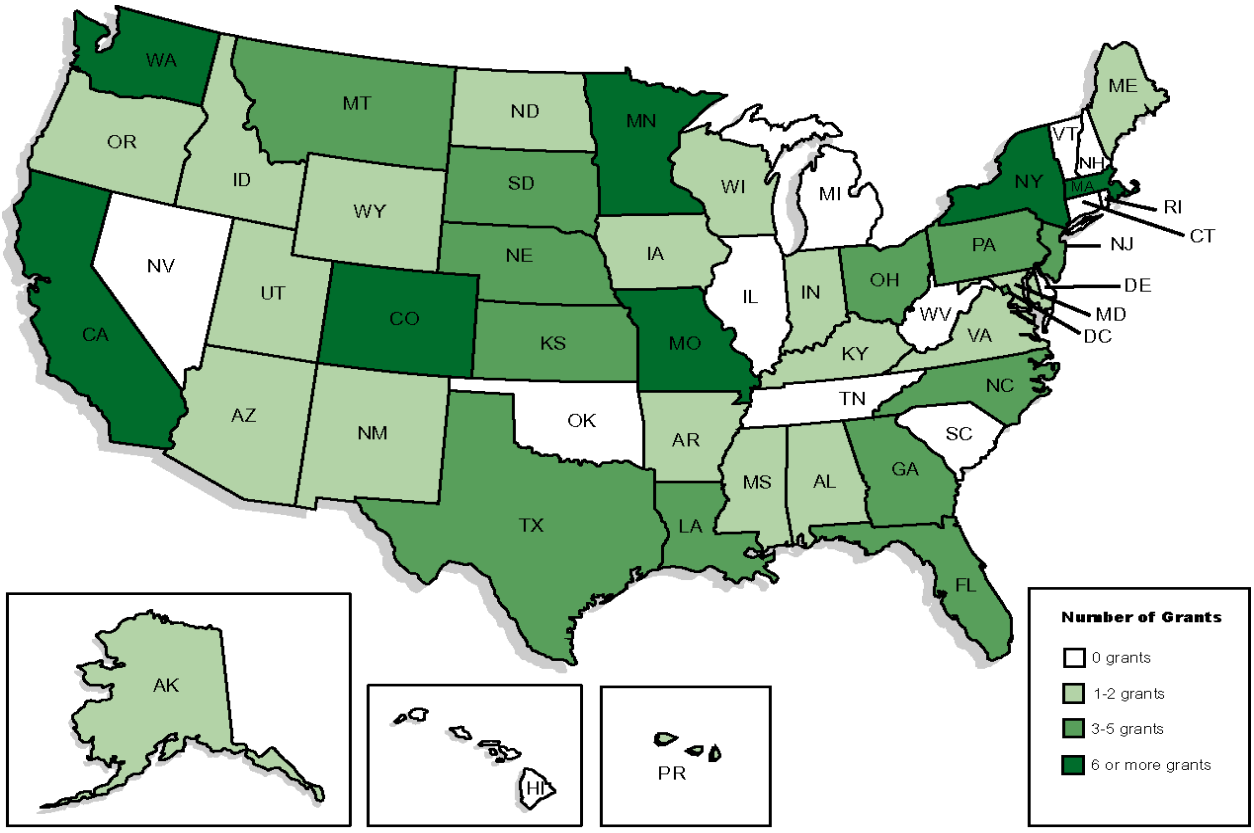


Table B-1, the EJP2 Grant Program Summary Table, provides details on the funding amount, grantee type, community or city targeted, and focus of grant activities. Each grant has been assigned a code to help readers refer to this table while reading this assessment. An alphabetical listing of grantee names and codes is provided in Table B-2.

Appendix B: EJP2 Funding and Distribution of Grants

Table B-1. EJP2 Grant Program Summary Table

Grantee	Funding Amount	Grantee Type	Community/City Targeted	Sectors Targeted	Businesses and Industries Targeted	Ethnic Communities Targeted	Assigned Activity Category	Code
REGION 1								
FY95								
Bowdoin Street Health Center	$53,450	Other organization	Boston, MA	Small Business and Industry	Automotive Repair/Service	African-American, Asian-American, Latin American	**Helping Small Businesses**	1-95-1
City of Boston, Office of Environmental Health	$53,450	Local government	Boston, MA	Small Business and Industry	Automotive Repair/Service	Latin American	**Helping Small Businesses**	1-95-2
NEWMOA	$53,450	Other organization	New England rural communities	Small Business and Industry	Automotive Repair/Service	Latin American	**Helping Small Businesses**	1-95-3
Roxbury Community College/Tellus	$100,000	Higher learning	Boston (Roxbury community), MA	Schools		African-American, Asian-American, Latin American	**Youth Education**	1-95-4
Waste Watch Center	$39,649	Environmental organization	Lowell, MA	Households		Asian-American	**Community Outreach**	1-95-5
Working Capital	$100,000	Other organization	Dorchester/Roxbury (Grove Hall community) and Worcester (Green Island community), MA	Small Business and Industry		African-American, Asian-American, Latin American	**Helping Small Businesses**	1-95-6
FY96								
Conservation Law Foundation	$77,791	Environmental organization	Boston, MA	Transportation		African-American, Asian-American, Latin American	**Resource Efficiency**	1-96-1
FY97								
Androscoggin Valley Council of Governments	$93,161	Local government	Oxford Hills region, ME	Small Business and Industry, Schools	Automotive Repair/Service	Caucasian	**Youth Education**	1-97-1
Community Action Agency of Somerville	$46,839	Community-based organization	Somerville, MA	Small Business and Industry	Automotive Repair/Service	African-American, Latin American	**Youth Education**	1-97-2

Appendix B: EJP2 Funding and Distribution of Grants

Grantee	Funding Amount	Grantee Type	Community/City Targeted	Sectors Targeted	Businesses and Industries Targeted	Ethnic Communities Targeted	Assigned Activity Category	Code
Neighborhoods Against Urban Pollution	$100,000	Community-based organization	Boston (Roxbury, Dorchester, Mattapan, Jamaica Plain, Chinatown, South Boston, East Boston, and Chelsea communities), MA	Households, Small Business and Industry, Transportation		African-American, Latin American	**Resource Efficiency**	1-97-3
Tellus Institute	$100,000	Environmental organization	Merrimack Valley communities, MA	Small Business and Industry	Incinerators	Not specified	**Community Outreach**	1-97-4
REGION 2								
FY95								
Citizens Environmental Research Institute	$100,000	Environmental organization	New York City (Garden City Park community, Long Island), NY	Small Business and Industry	Automotive Repair/Service, Printers	African-American, Latin American	**Community Outreach**	2-95-1
Clean Water Fund	$11,663	Environmental organization	Camden County, NJ	Households, Schools		African-American, Asian-American, Latin American	**Community Outreach**	2-95-2
Council on the Environment, Inc.	$49,452	Community-based organization	New York City (Greenpoint and Williamsburg communities, Brooklyn), NY	Schools, Transportation		African-American, Caucasian, Latin American	**Youth Education**	2-95-3
Dunbar Association, Inc.	$100,000	Community-based organization	Syracuse, NY	Small Business and Industry		African-American, Latin American	**Helping Small Businesses**	2-95-4
El Puente of Williamsburg	$98,885	Community-based organization	New York City (Greenpoint and Williamsburg communities, Brooklyn), NY	Small Business and Industry		African-American, Caucasian, Latin American	**Community Outreach**	2-95-5
Isles, Inc.	$25,000	Community-based organization	Trenton, NJ	Households, Schools		Not specified	**Youth Education**	2-95-6
FY96								
We Act/Natural Resources Defense Council	$200,000	Community-based organization	New York City (North Manhattan communities), NY	Small Business and Industry, Transportation	Dry Cleaners	African-American, Latin American	**Community Outreach**	2-96-1

Appendix B: EJP2 Funding and Distribution of Grants

Grantee	Funding Amount	Grantee Type	Community/City Targeted	Sectors Targeted	Businesses and Industries Targeted	Ethnic Communities Targeted	Assigned Activity Category	Code
FY97								
Council on the Environment, Inc.	$99,997	Community-based organization	New York City (Greenpoint and Williamsburg communities, Brooklyn), NY	Schools		African-American, Caucasian, Latin American	**Youth Education**	2-97-1
Harlem Environmental Impact Project, Inc.	$30,000	Community-based organization	New York City (Harlem community), NY	Households		African-American	**Community Outreach**	2-97-2
Haudenosuanee Environmental Task Force	$100,000	Tribe or tribal organization	Iroquois Confederacy	Households, Small Business and Industry		Native American	**Tribal Environments**	2-97-3
Incorporated Rabanal Small Farmers	$44,100	Other organization	Rabanal, PR	Agriculture		Latin American	**Agricultural P2**	2-97-4
New Jersey Community Development Corporation	$66,903	Community-based organization	Paterson, NJ	Households, Small Business and Industry		Not specified	**Community Outreach**	2-97-5
REGION 3								
FY95								
Alice Hamilton Occupational Health Center	$81,670	Other organization	Washington, DC; Baltimore, MD; Prince George's County, MD	Small Business and Industry, Building and Construction		African-American, Latin American	**Helping Small Businesses**	3-95-1
Delaware Valley Citizens' Council for Clean Air	$46,200	Environmental organization	Philadelphia (Germantown and Mount Airy communities), PA	Small Business and Industry, Local Government		African-American	**Community Outreach**	3-95-2
New River-Highland RC&D Council	$96,960	Local government	Smyth County and Washington County, VA	Agriculture, Schools		Caucasian	**Youth Education**	3-95-3
Painters and Allied Trades Labor Management Cooperation Fund	$94,875	Other organization	Philadelphia, PA; Baltimore, MD; Alexandria, VA	Small Business and Industry, Building and Construction		Latin American	**Helping Small Businesses**	3-95-4
University of Maryland at Eastern Shore	$49,940	Higher learning	Washington, DC	Schools		African-American	**Youth Education**	3-95-5

Appendix B: EJP2 Funding and Distribution of Grants

Grantee	Funding Amount	Grantee Type	Community/City Targeted	Sectors Targeted	Businesses and Industries Targeted	Ethnic Communities Targeted	Assigned Activity Category	Code
FY96								
Delaware Valley Citizens' Council for Clean Air	$195,090	Environmental organization	Philadelphia (Germantown and Mount Airy communities), PA	Small Business and Industry		African-American	**Community Outreach**	3-96-1
FY97								
Center for Hazardous Material Research	$100,000	Environmental organization	Alleghany County (Rankin, Homestead, Braddock, McKeesport, Homewood, and Brushton communities), PA	Small Business and Industry		Not specified	**Helping Small Businesses**	3-97-1
Elizabeth River Project	$82,422	Community-based organization	Norfolk, VA; Portsmouth, VA; Chesapeake, VA	Small Business and Industry	Shipyards	African-American	**Helping Small Businesses**	3-97-2
Garden Resources of Washington	$56,245	Community-based organization	Washington, DC	Households, Schools		African-American	**Resource Efficiency**	3-97-3
Howard University	$100,000	Higher learning	Washington, DC	Small Business and Industry		African-American	**Helping Small Businesses**	3-97-4
REGION 4								
FY95								
Broward County Department of Natural Resources	$80,000	Local government	Broward County, FL	Small Business and Industry, Schools		Not specified	**Community Outreach**	4-95-1
Carroll County Pollution Abatement and Conservation Project	$23,714	Local government	Carroll County, Trimble County, and Gallatin County, KY	Households, Small Business and Industry		Caucasian	**Community Outreach**	4-95-2
City of Atlanta, GA	$50,000	Local government	Atlanta, GA	Small Business and Industry		Not specified	**Partnerships with Industrial Facilities**	4-95-3
Miiami-Dade County, FL	$84,536	Local government	Miami-Dade County (City of Opa-locka), FL	Households, Small Business and Industry	Automotive Repair/Service, Electroplating	African-American	**Community Outreach**	4-95-4

Appendix B: EJP2 Funding and Distribution of Grants

Grantee	Funding Amount	Grantee Type	Community/City Targeted	Sectors Targeted	Businesses and Industries Targeted	Ethnic Communities Targeted	Assigned Activity Category	Code
Northampton County, NC	$80,000	Local government	Northampton County and Bertie County, NC	Agriculture		African-American	**Community Outreach**	4-95-5
Poarch Creek Indians	$90,000	Tribe or tribal organization	Poarch Creek Indians	Agriculture		Native American	**Tribal Environments**	4-95-6
Southface Energy Institute	$70,000	Environmental organization	Atlanta, GA	Households, Building and Construction		Not specified	**Resource Efficiency**	4-95-7
University of North Carolina at Charlotte	$21,750	Higher learning	Gaston County, NC	Small Business and Industry, Agriculture		Not specified	**Community Outreach**	4-95-8
FY96								
University of Louisville	$208,322	Higher learning	Jefferson County (West End community), KY	Small Business and Industry	Chemical Manufacturing	African-American	**Partnerships with Industrial Facilities**	4-96-1
FY97								
Birmingham Environmental Clearinghouse	$100,000	Community-based organization	Birmingham, AL	Households, Small Business and Industry		African-American	**Partnerships with Industrial Facilities**	4-97-1
Citizens for a Better South Florida, Inc.	$90,773	Community-based organization	Miami-Dade County (City of Hialeah), FL	Households		Latin American	**Community Outreach**	4-97-2
Escambia County, FL	$79,728	Local government	Escambia County (Warrington community), FL	Households, Small Business and Industry		African-American, Caucasian	**Community Outreach**	4-97-3
Georgia Environmental Organization	$31,900	Community-based organization	Atlanta (Proctor Creek communities), GA	Small Business and Industry		African-American	**Community Outreach**	4-97-4
Mississippi Band of Choctaw Indians	$91,632	Tribe or tribal organization	Mississippi Band of Choctaw Indians	Local Government		Native American	**Tribal Environments**	4-97-5
University of North Carolina - Continued Funding	$29,095	Higher learning	Gaston County, NC	Small Business and Industry, Agriculture		Not specified	**Community Outreach**	4-97-6

Appendix B: EJP2 Funding and Distribution of Grants

Grantee	Funding Amount	Grantee Type	Community/City Targeted	Sectors Targeted	Businesses and Industries Targeted	Ethnic Communities Targeted	Assigned Activity Category	Code
REGION 5								
FY95								
Clean Water Fund	$85,000	Environmental organization	Minnesota, Wisconsin, and Michigan tribal communities			Native American	**Tribal Environments**	5-95-1
Environmental Careers Organization	$50,000	Environmental organization	Minneapolis, MN; Chicago, IL; Ann Arbor, MI; Whiting, IN; Cleveland, OH	Small Business and Industry		Not specified	**Partnerships with Industrial Facilities**	5-95-2
Grand Cal Task Force	$66,080	Community-based organization	Chicago, IL; Gary, IN; Hammond, IN	Households, Schools		African-American, Latin American	**Community Outreach**	5-95-3
Lower Sioux	$49,920	Tribe or tribal organization	Lower Sioux Tribe	Households, Local Government		Native American	**Tribal Environments**	5-95-4
Minneapolis Urban League	$58,320	Community-based organization	Minneapolis, MN	Small Business and Industry		African-American	**Youth Education**	5-95-5
Native American Educational Services College	$6,780	Tribe or tribal organization	Menominee Tribe	Households		Native American	**Tribal Environments**	5-95-6
University of Cincinnati	$88,900	Higher learning	Cincinnati (Lower Price Hill community), OH	Households, Small Business and Industry		Caucasian	**Community Outreach**	5-95-7
WSOS Community Action Commission	$95,000	Community-based organization	Sandusky County, Seneca County, Ottawa County, Wood County, and Wyandot County, OH	Agriculture		Latin American	**Agricultural P2**	5-95-8
FY96								
Citizens for a Better Environment	$148,987	Environmental organization	Chicago (Southeast community), IL; Milwaukee (South Side community), WI; Minneapolis (Hawthorne community), MN	Small Business and Industry	Automotive Repair/Service	African-American, Latin American	**Partnerships with Industrial Facilities**	5-96-1

Appendix B: EJP2 Funding and Distribution of Grants

Grantee	Funding Amount	Grantee Type	Community/City Targeted	Sectors Targeted	Businesses and Industries Targeted	Ethnic Communities Targeted	Assigned Activity Category	Code
FY97								
Fond du Lac Reservation Business Committee	$22,080	Tribe or tribal organization	Fond du Lac Tribe	Small Business and Industry, Schools		Native American	**Tribal Environments**	5-97-1
Lower Sioux	$90,000	Tribe or tribal organization	Lower Sioux Tribe	Households, Local Government		Native American	**Tribal Environments**	5-97-2
Mill Creek Restoration Project - Rivers Unlimited	$99,998	Environmental organization	Hamilton County and Cincinnati, OH	Small Business and Industry, Schools		African-American, Caucasian	**Community Outreach**	5-97-3
Sixteenth Street Community Health Center	$98,375	Other organization	Milwaukee (South Side community), WI	Schools		Latin American	**Youth Education**	5-97-4
Youngstown-Warren Regional Chamber of Commerce	$100,000	Other organization	Mahoning County and Trumbull County, OH	Small Business and Industry		Latin American	**Community Outreach**	5-97-5
REGION 6								
FY95								
Bill J. Priest Institute for Economic Development Technology Assistance Center	$80,000	Other organization	Dallas, TX	Small Business and Industry		African-American, Latin American	**Helping Small Businesses**	6-95-1
Greater Laredo Development Foundation	$80,000	Other organization	Laredo, TX	Small Business and Industry, Transportation		Latin American	**Helping Small Businesses**	6-95-2
Jemez Pueblo Pollution Prevention Project	$80,000	Tribe or tribal organization	Jemez Pueblo	Households		Native American	**Tribal Environments**	6-95-3
New Orleans Youth Action Corps	$80,000	Community-based organization	New Orleans, LA	Households		Not specified	**Youth Education**	6-95-4
Pueblo of Pojoaque	$80,000	Tribe or tribal organization	Pojoaque Pueblo, Nambe Pueblo, and San Ildefonso Pueblo	Local Government		Native American	**Tribal Environments**	6-95-5

Appendix B: EJP2 Funding and Distribution of Grants

Grantee	Funding Amount	Grantee Type	Community/City Targeted	Sectors Targeted	Businesses and Industries Targeted	Ethnic Communities Targeted	Assigned Activity Category	Code
Zion Travelers Baptist Church	$30,000	Community-based organization	St. John the Baptist Parish (Mt. Airy, Garyville, and Lions communities), LA	Local Government		African-American	**Community Outreach**	6-95-6
FY96								
National Center for Appropriate Technology	$236,442	Other organization	Texas Panhandle communities (colonias near Hereford), TX	Agriculture		Latin American	**Agricultural P2**	6-96-1
FY97								
Central Arkansas Regional Solid Waste Management District	$99,998	Local government	Faulkner County, Monroe County, Prairie County, and Lonoke County, AR	Households, Small Business and Industry		Not specified	**Community Outreach**	6-97-1
City of Houston	$94,062	Local government	Houston, TX	Small Business and Industry	Automotive Repair/Service, Electroplating	African-American, Latin American	**Helping Small Businesses**	6-97-2
Louisiana Environmental Justice Project	$100,000	Community-based organization	New Orleans, LA	Small Business and Industry	Shipyards	African-American	**Partnerships with Industrial Facilities**	6-97-3
REGION 7								
FY95								
Arkansas Institute for Social Justice	$20,000	Community-based organization	St. Louis, MO	Local Government		African-American	**Community Outreach**	7-95-1
Haskell Indian Nations University	$45,000	Tribe or tribal organization	Midwest tribal communities	Schools		Native American	**Tribal Environments**	7-95-2
Lincoln-Lancaster County Health Department	$39,000	Local government	Lincoln County and Lancaster County, NE	Small Business and Industry		Asian-American, Latin American, Native American	**Community Outreach**	7-95-3
Metropolitan Energy Center	$49,800	Environmental organization	Kansas City (Westside community), MO	Households		African-American	**Resource Efficiency**	7-95-4
Missouri Energy Resources Project	$72,000	Environmental organization	St. Louis, MO	Schools		African-American	**Resource Efficiency**	7-95-5

Appendix B: EJP2 Funding and Distribution of Grants

Grantee	Funding Amount	Grantee Type	Community/City Targeted	Sectors Targeted	Businesses and Industries Targeted	Ethnic Communities Targeted	Assigned Activity Category	Code
Nebraska Sustainable Agriculture Society	$25,000	Environmental organization	Custer County, Adams County, and Fordyce, Hartington, and Bow Valley, NE	Agriculture		Not specified	**Agricultural P2**	7-95-6
University of Nebraska - Omaha	$75,000	Higher learning	Midwest communities	Small Business and Industry	Printers	Not specified	**Helping Small Businesses**	7-95-7
Wichita-Sedgwick County Department of Community Health	$73,000	Local government	Wichita, KS	Small Business and Industry		Not specified	**Helping Small Businesses**	7-95-8
FY96								
Metropolitan Energy Center	$213,760	Environmental organization	Kansas City (Westside community), MO	Transportation		Latin American	**Resource Efficiency**	7-96-1
FY97								
Community Health and Education Services	$70,000	Community-based organization	Wyandotte County, KS	Households, Small Business and Industry, Schools		African-American, Caucasian	**Community Outreach**	7-97-1
Lincoln-Lancaster County Health Department	$80,000	Local government	Lincoln County and Lancaster County, NE	Small Business and Industry		Asian-American, Latin American, Native American	**Community Outreach**	7-97-2
Metropolitan St. Louis Sewer District	$80,554	Local government	St. Louis, MO	Households		Not specified	**Community Outreach**	7-97-3
Mid-America Regional Council	$10,000	Local government	Kansas City, MO and Kansas City, KS	Households		African-American, Latin American	**Community Outreach**	7-97-4
University of Northern Iowa	$99,163	Higher learning	Midwest communities	Transportation		Not specified	**Helping Small Businesses**	7-97-5
REGION 8								
FY95								
Denver Urban Gardens	$25,000	Community-based organization	Denver, CO	Households		Not specified	**Resource Efficiency**	8-95-1
Grand Junction Energy Office	$55,000	Local government	Mesa County and Grand Junction, CO	Small Business and Industry, Building and Construction		Latin American	**Community Outreach**	8-95-2

Appendix B: EJP2 Funding and Distribution of Grants

Grantee	Funding Amount	Grantee Type	Community/City Targeted	Sectors Targeted	Businesses and Industries Targeted	Ethnic Communities Targeted	Assigned Activity Category	Code
Montana State University Extension Service	$50,000	Higher learning	Northern Cheyenne, Fort Peck, and Crow Indian tribes	Households, Local Government		Native American	**Tribal Environments**	8-95-3
Northwestern Band of the Shoshoni Nation	$50,000	Tribe or tribal organization	Utah tribal communities	Local Government		Native American	**Tribal Environments**	8-95-4
Running Strong for American Indian Youth	$25,000	Tribe or tribal organization	Oglala Sioux Tribe	Agriculture		Native American	**Tribal Environments**	8-95-5
Shoshone & Northern Arapaho Tribes	$40,000	Tribe or tribal organization	Shoshone and Northern Arapaho tribes	Schools		Native American	**Tribal Environments**	8-95-6
Sinte Gleska University	$50,000	Tribe or tribal organization	Rosebud Sioux Tribe	Schools		Native American	**Tribal Environments**	8-95-7
Tri-County Health Department	$30,000	Local government	Denver, CO	Small Business and Industry	Automotive Repair/Service	Caucasian, Latin American	**Helping Small Businesses**	8-95-8
Turtle Mountain Band of Chippewa Indians	$25,000	Tribe or tribal organization	Turtle Mountain Band of Chippewa Indians	Schools		Native American	**Tribal Environments**	8-95-9
Waste Reduction Institute (WRITAR)	$50,000	Environmental organization	Rosebud Sioux and Blackfeet Indian tribes	Small Business and Industry, Building and Construction		Native American	**Tribal Environments**	8-95-10
FY96								
Northeast Denver Housing Center, Inc.	$250,000	Community-based organization	Denver, CO	Building and Construction		Native American	**Resource Efficiency**	8-96-1
FY97								
Montana State University	$100,000	Higher learning	Northern Cheyenne, Fort Peck, and Crow Indian tribes	Schools		Native American	**Tribal Environments**	8-97-1
Montana Tribal Business Information Network	$85,000	Tribe or tribal organization	Montana tribal communities	Small Business and Industry		Native American	**Tribal Environments**	8-97-2
National Association of Black Environmentalists	$100,000	Environmental organization	Denver (Northeast Park Hill community), CO	Small Business and Industry		African-American	**Community Outreach**	8-97-3

Appendix B: EJP2 Funding and Distribution of Grants

Grantee	Funding Amount	Grantee Type	Community/City Targeted	Sectors Targeted	Businesses and Industries Targeted	Ethnic Communities Targeted	Assigned Activity Category	Code
Running Strong for American Indian Youth	$30,000	Tribe or tribal organization	Oglala Sioux tribe	Agriculture		Native American	**Tribal Environments**	8-97-4
Town of Meeker	$25,000	Local government	Rio Blanco County (Town of Meeker), CO	Small Business and Industry		Not specified	**Community Outreach**	8-97-5
REGION 9								
FY95								
City of Nogales, AZ	$86,250	Local government	Nogales, AZ	Small Business and Industry		Latin American	**Helping Small Businesses**	9-95-1
Institute for Research and Technical Assistance	$96,750	Other organization	Los Angeles, CA	Small Business and Industry	Automotive Repair/Service	Latin American	**Helping Small Businesses**	9-95-2
Pima County, AZ	$72,000	Local government	Pima County (City of South Tucson), AZ	Households, Small Business and Industry		Latin American	**Community Outreach**	9-95-3
Resource Policy Institute	$50,000	Environmental organization	Imperial Valley communities, CA	Small Business and Industry		Latin American	**Community Outreach**	9-95-4
South Bayshore Community Development Corporation, Inc.	$95,000	Community-based organization	San Francisco, CA	Small Business and Industry	Restaurant/Food Service	African-American	**Community Outreach**	9-95-5
FY96								
Korean Youth & Community Center, Inc.	$100,000	Community-based organization	Los Angeles, CA	Small Business and Industry	Dry Cleaners	Asian-American	**Helping Small Businesses**	9-96-1
FY97								
Association for Community Based Education	$100,000	Community-based organization	Central Coast communities, CA	Agriculture		Latin American	**Agricultural P2**	9-97-1
Ecology Action, Inc.	$41,484	Environmental organization	Northern California communities, CA	Small Business and Industry	Dry Cleaners	Asian-American	**Helping Small Businesses**	9-97-2
Institute for Research and Technical Assistance	$96,516	Other organization	Los Angeles, CA	Small Business and Industry	Automotive Repair/Service	Latin American	**Helping Small Businesses**	9-97-3

Appendix B: EJP2 Funding and Distribution of Grants

Grantee	Funding Amount	Grantee Type	Community/City Targeted	Sectors Targeted	Businesses and Industries Targeted	Ethnic Communities Targeted	Assigned Activity Category	Code
Local Government Commission	$42,000	Community-based organization	Richmond, CA	Small Business and Industry, Schools	Custodial/Janitors	Not specified	**Helping Small Businesses**	9-97-4
Los Angeles Conservation Corps	$60,000	Environmental organization	Los Angeles, CA	Households		African-American, Latin American	**Resource Efficiency**	9-97-5
REGION 10								
FY95								
American Lung Association	$25,000	Environmental organization	Seattle (Central Seattle and Ranier Valley communities), WA	Households		African-American, Caucasian	**Community Outreach**	10-95-1
Cascadia Revolving Fund	$75,000	Other organization	Washington communities	Small Business and Industry	Dry Cleaners	Asian-American	**Helping Small Businesses**	10-95-2
City of Pilot Point	$49,737	Local government	Pilot Point, AK	Households, Local Government		Native American	**Tribal Environments**	10-95-3
Painting Industry Partnership	$50,000	Other organization	Seattle, WA; Tacoma, WA; Portland, OR	Small Business and Industry, Building and Construction		Not specified	**Resource Efficiency**	10-95-4
Sea Mar Community Health Center	$25,000	Other organization	Seattle, WA	Households		Not specified	**Community Outreach**	10-95-5
Spokane Tribe	$25,000	Tribe or tribal organization	Spokane Tribe	Agriculture		Native American	**Tribal Environments**	10-95-6
University of Northern Iowa	$70,743	Higher learning	Idaho communities	Small Business and Industry	Automotive Repair/Service	Not specified	**Helping Small Businesses**	10-95-7
Urban League of Portland	$79,155	Community-based organization	Portland, OR	Small Business and Industry		African-American	**Community Outreach**	10-95-8
FY96								
Tulalip Tribes of Washington	$196,614	Tribe or tribal organization	Tulalip Tribes of Washington	Local Government		Native American	**Tribal Environments**	10-96-1
FY97								
Chickaloon Native Village	$80,000	Tribe or tribal organization	Chickaloon Native Village	Local Government		Native American	**Tribal Environments**	10-97-1

Appendix B: EJP2 Funding and Distribution of Grants

Grantee	Funding Amount	Grantee Type	Community/City Targeted	Sectors Targeted	Businesses and Industries Targeted	Ethnic Communities Targeted	Assigned Activity Category	Code
Community Coalition for Environmental Justice	$20,000	Community-based organization	Seattle (South Park community), WA	Small Business and Industry		Latin American	**Helping Small Businesses**	10-97-2
International District Housing and Social Services	$80,000	Community-based organization	Seattle, WA	Schools		Asian-American	**Community Outreach**	10-97-3
Oregon Environmental Council	$80,000	Environmental organization	Portland (Albina community), OR	Schools		African-American	**Community Outreach**	10-97-4
Tacoma Urban League, Inc.	$80,000	Community-based organization	Tacoma (Salishan community), WA	Households, Building and Construction		African-American, Asian-American	**Community Outreach**	10-97-5
NATIONAL								
FY96								
National Association of Community Development Loan Funds	$250,000	Other organization	Communities throughout the United States	Small Business and Industry		Not specified	**Helping Small Businesses**	Natl-96-1
FY97								
America Works Partnership	$160,138	Community-based organization	Oakland, CA; Chicago, IL	Building and Construction		African-American, Native American	**Resource Efficiency**	Natl-97-1
Oil, Chemical, and Atomic Workers International Union	$130,000	Other organization	Los Angeles, CA; northwestern Indiana; central New Jersey; Philadelphia, PA	Small Business and Industry	Petroleum Refining	Not specified	**Community Outreach**	Natl-97-2
Reynoldstown Revitalization Corporation	$159,753	Other organization	Atlanta, GA	Local Government		Not specified	**Community Outreach**	Natl-97-3
TOTAL	**$10,217,001**							

Table B-2. Alphabetical Listing of Grantee Names and Codes

Alice Hamilton Occupational Health Center 3-95-1
America Works Partnership Natl-97-1
American Lung Association 10-95-1
Androscoggin Valley Council of Governments 1-97-1
Arkansas Institute for Social Justice 7-95-1
Association for Community Based Education 9-97-1
Bill J. Priest Institute for Economic Development 6-95-1
Birmingham Environmental Clearinghouse 4-97-1
Bowdoin Street Health Center 1-95-1
Broward County Department of Natural Resources 4-95-1
Carroll County Pollution Abatement and Conservation Project 4-95-2
Cascadia Revolving Fund 10-95-2
Center for Hazardous Material Research 3-97-1
Central Arkansas Regional Solid Waste Management District 6-97-1
Chickaloon Native Village 10-97-1
Citizens Environmental Research Institute 2-95-1
Citizens for a Better Environment 5-96-1
Citizens for a Better South Florida 4-97-2
City of Atlanta, GA 4-95-3
City of Boston, Office of Environmental Health 1-95-2
City of Houston, TX 6-97-2
City of Nogales, AZ 9-95-1
City of Pilot Point, AK 10-95-3
Clean Water Fund (Region 2) 2-95-2
Clean Water Fund (Region 5) 5-95-1
Community Action Agency of Somerville 1-97-2
Community Coalition for Environmental Justice 10-97-2
Community Health and Education Services 7-97-1
Conservation Law Foundation 1-96-1
Council on the Environment, Inc. (1995) 2-95-3
Council on the Environment, Inc. (1997) 2-97-1
Delaware Valley Citizens' Council for Clean Air (1995) 3-95-2
Delaware Valley Citizens' Council for Clean Air (1996) 3-96-1
Denver Urban Gardens 8-95-1
Dunbar Association, Inc. 2-95-4
Ecology Action 9-97-2
El Puente of Williamsburg 2-95-5
Elizabeth River Project 3-97-2
Environmental Careers Organization 5-95-2
Escambia County, FL 4-97-3
Fond du Lac Reservation Business Committee 5-97-1

Garden Resources of Washington 3-97-3
Georgia Environmental Organization 4-97-4
Grand Cal Task Force 5-95-3
Grand Junction Energy Office 8-95-2
Greater Laredo Development Foundation 6-95-2
Harlem Environmental Impact Project 2-97-2
Haskell Indian Nations University 7-95-2
Haudenosuanee Environmental Task Force 2-97-3
Howard University 3-97-4
Incorporated Rabanal Small Farmers 2-97-4
Institute for Research and Technical Assistance (1995) 9-95-2
Institute for Research and Technical Assistance (1997) 9-97-3
International District Housing and Social Services 10-97-3
Isles, Inc. 2-95-6
Jemez Pueblo Pollution Prevention Project 6-95-3
Korean Youth & Community Center, Inc. 9-96-1
Lincoln-Lancaster County Health Department (1995) 7-95-3
Lincoln-Lancaster County Health Department (1997) 7-97-2
Local Government Commission 9-97-4
Los Angeles Conservation Corps 9-97-5
Louisiana Environmental Justice Project 6-97-3
Lower Sioux (1995) 5-95-4
Lower Sioux (1997) 5-97-2
Metropolitan Energy Center (1995) 7-95-4
Metropolitan Energy Center (1996) 7-96-1
Metropolitan St. Louis Sewer District 7-97-3
Miami-Dade County, FL 4-95-4
Mid-America Regional Council 7-97-4
Mill Creek Restoration Project - Rivers Unlimited 5-97-3
Minneapolis Urban League 5-95-5
Mississippi Band of Choctaw Indians 4-97-5
Missouri Energy Resources Project 7-95-5
Montana State University 8-97-1
Montana State University Extension Service 8-95-3
Montana Tribal Business Information Network 8-97-2
National Association of Black Environmentalists 8-97-3
National Association of Community Development Loan Funds Natl-96-1
National Center for Appropriate Technology 6-96-1
Native American Educational Services College 5-95-6
Nebraska Sustainable Agriculture Society 7-95-6
Neighborhoods Against Urban Pollution 1-97-3
New Jersey Community Development Corporation 2-97-5
New Orleans Youth Action Corps 6-95-4

New River-Highland RC&D Council 3-95-3
NEWMOA 1-95-3
Northampton County, NC 4-95-5
Northeast Denver Housing Center, Inc. 8-96-1
Northwestern Band of the Shoshoni Nation 8-95-4
Oil, Chemical, and Atomic Workers International Union Natl-97-2
Oregon Environmental Council 10-97-4
Painters and Allied Trades Labor Management Cooperation Fund 3-95-4
Painting Industry Partnership 10-95-4
Pima County, AZ 9-95-3
Poarch Creek Indians 4-95-6
Pueblo of Pojoaque 6-95-5
Resource Policy Institute 9-95-4
Reynoldstown Revitalization Corporation Natl-97-3
Roxbury Community College/Tellus 1-95-5
Running Strong for American Indian Youth (1995) 8-95-5
Running Strong for American Indian Youth (1997) 8-97-4
Sea Mar Community Health Center 10-95-5
Shoshone & Northern Arapaho Tribes 8-95-6
Sinte Gleska University 8-95-7
Sixteenth Street Community Health Center 5-97-4
South Bayshore Community Development Corporation, Inc. 9-95-5
Southface Energy Institute 4-95-7
Spokane Tribe 10-95-6
Tacoma Urban League, Inc. 10-97-5
Tellus Institute 1-97-4
Town of Meeker 8-97-5
Tri-County Health Department 8-95-8
Tulalip Tribes of Washington 10-96-1
Turtle Mountain Band of Chippewa Indians 8-95-9
University of Cincinnati 5-95-7
University of Louisville 4-96-1
University of Maryland at Eastern Shore 3-95-5
University of Nebraska at Omaha 7-95-7
University of North Carolina at Charlotte (1995) 4-95-8
University of North Carolina at Charlotte (1997) 4-97-6
University of Northern Iowa (Region 7) 7-97-5
University of Northern Iowa (Region 10) 10-95-7
Urban League of Portland 10-95-8
Waste Reduction Institute (WRITAR) 8-95-10
Waste Watch Center 1-95-5
We Act/Natural Resource Defense Council 2-96-1
Wichita-Sedgwick County Department of Community Health 7-95-8

Working Capital 1-95-6
WSOS Community Action Commission 5-95-8
Youngstown-Warren Regional Chamber of Commerce 5-97-5
Zion Travelers Baptist Church 6-95-6

APPENDIX C: GRANT PRODUCTS BY ASSIGNED CATEGORY

Helping Small Businesses Prevent Pollution in Communities

Alice Hamilton Occupational Health Center
Bill J. Priest Institute for Economic Development, Technology Assistance Center
Bowdoin Street Health Center
Cascadia Revolving Fund
Center for Hazardous Material Research
City of Boston, Office of Environmental Health
City of Houston, Texas
City of Nogales, Arizona
Community Coalition for Environmental Justice
Dunbar Association, Inc.
Ecology Action, Inc.
Elizabeth River Project
Greater Laredo Development Foundation
Howard University
Institute for Research and Technical Assistance (1995)
Institute for Research and Technical Assistance (1997)
Korean Youth & Community Center, Inc.
Local Government Commission
National Association of Community Development Loan Funds
Northeast Waste Management Officials Association
Painters and Allied Trades Labor Management Cooperation Fund
Tri-County Health Department
University of Nebraska at Omaha
University of Northern Iowa (Region 7)
University of Northern Iowa (Region 10)
Wichita-Sedgwick County Department of Community Health
Working Capital

Fostering Partnerships Between Industrial Facilities and Communities

Birmingham Environmental Clearinghouse
Citizens for a Better Environment
City of Atlanta, Georgia
Environmental Careers Organization
Louisiana Environmental Justice Project
University of Louisville

Educating Communities About Pollution Prevention

American Lung Association
Arkansas Institute for Social Justice
Broward County Department of Natural Resources
Carroll County Pollution Abatement and Conservation Project
Central Arkansas Regional Solid Waste Management District
Citizens Environmental Research Institute
Citizens for a Better South Florida, Inc.
Clean Water Fund (Region 2)
Community Health and Education Services
Delaware Valley Citizens' Council for Clean Air (1995)
Delaware Valley Citizens' Council for Clean Air (1997)
El Puente of Williamsburg
Escambia County, Florida
Georgia Environmental Organization
Grand Cal Task Force
Grand Junction Energy Office
Harlem Environmental Impact Project, Inc.
International District Housing and Social Services
Lincoln-Lancaster County Health Department (1995)
Lincoln-Lancaster County Health Department (1997)
Metropolitan St. Louis Sewer District
Miami-Dade County, Florida
Mid-America Regional Council
Mill Creek Restoration Project - Rivers Unlimited
National Association of Black Environmentalists
New Jersey Community Development Corporation
Northampton County, North Carolina
Oil, Chemical, and Atomic Workers International Union
Oregon Environmental Council
Pima County, Arizona
Resource Policy Institute
Reynolds Revitalization Corporation
Sea Mar Community Health Center
South Bayshore Community Development Corporation, Inc.
Tacoma Urban League, Inc.
Tellus Institute
Town of Meeker
University of Cincinnati
University of North Carolina at Charlotte (1995)
University of North Carolina at Charlotte (1997)
Urban League of Portland

Waste Watch Center
We Act/Natural Resources Defense Council
Youngstown-Warren Regional Chamber of Commerce
Zion Travelers Baptist Church

Promoting Efficient Resource Use Within Communities

America Works Partnership
Conservation Law Foundation
Denver Urban Gardens
Garden Resources of Washington
Los Angeles Conservation Corps
Metropolitan Energy Center (1995)
Metropolitan Energy Center (1996)
Missouri Energy Resources Project
Neighborhoods Against Urban Pollution
Northeast Denver Housing Center, Inc.
Painting Industry Partnerships
Southface Energy Institute

Fostering Youth Education and Involvement

Androscoggin Valley Council of Governments
Community Action Agency of Somerville
Council on the Environment, Inc. (1995)
Council on the Environment, Inc. (1997)
Isles, Inc.
Minneapolis Urban League
New Orleans Youth Action Corps
New River-Highland Resource and Conservation Development Council
Roxbury Community College/Tellus
Sixteenth Street Community Health Center
University of Maryland at Eastern Shore

Demonstrating Agricultural Pollution Prevention

Association for Community-Based Education
Incorporated Rabanal Small Farmers
National Center for Appropriate Technology
Nebraska Sustainable Agriculture Society
WSOS Community Action Commission

Improving Tribal Environments

Chickaloon Native Village
City of Pilot Point
Clean Water Fund (Region 5)
Fond du Lac Reservation Committee
Haskell Indian Nations University
Haudenosuanee Environmental Task Force
Jemez Pueblo Pollution Prevention Project
Lower Sioux Communities (1995)
Lower Sioux Communities (1997)
Mississippi Band of Choctaw Indians
Montana State University
Montana State University Extension Service
Montana Tribal Business Information Network
Native American Educational Services College
Northwestern Band of the Shoshoni Nation
Poarch Creek Indians
Pueblo of Pojaque
Running Strong for American Indian Youth (1995)
Running Strong for American Indian Youth (1997)
Shoshone and Northern Arapaho Tribes
Sinte Gleska University
Spokane Tribe
Tulalip Tribes of Washington
Turtle Mountain Band of Chippewa Indians
Waste Reduction Institute